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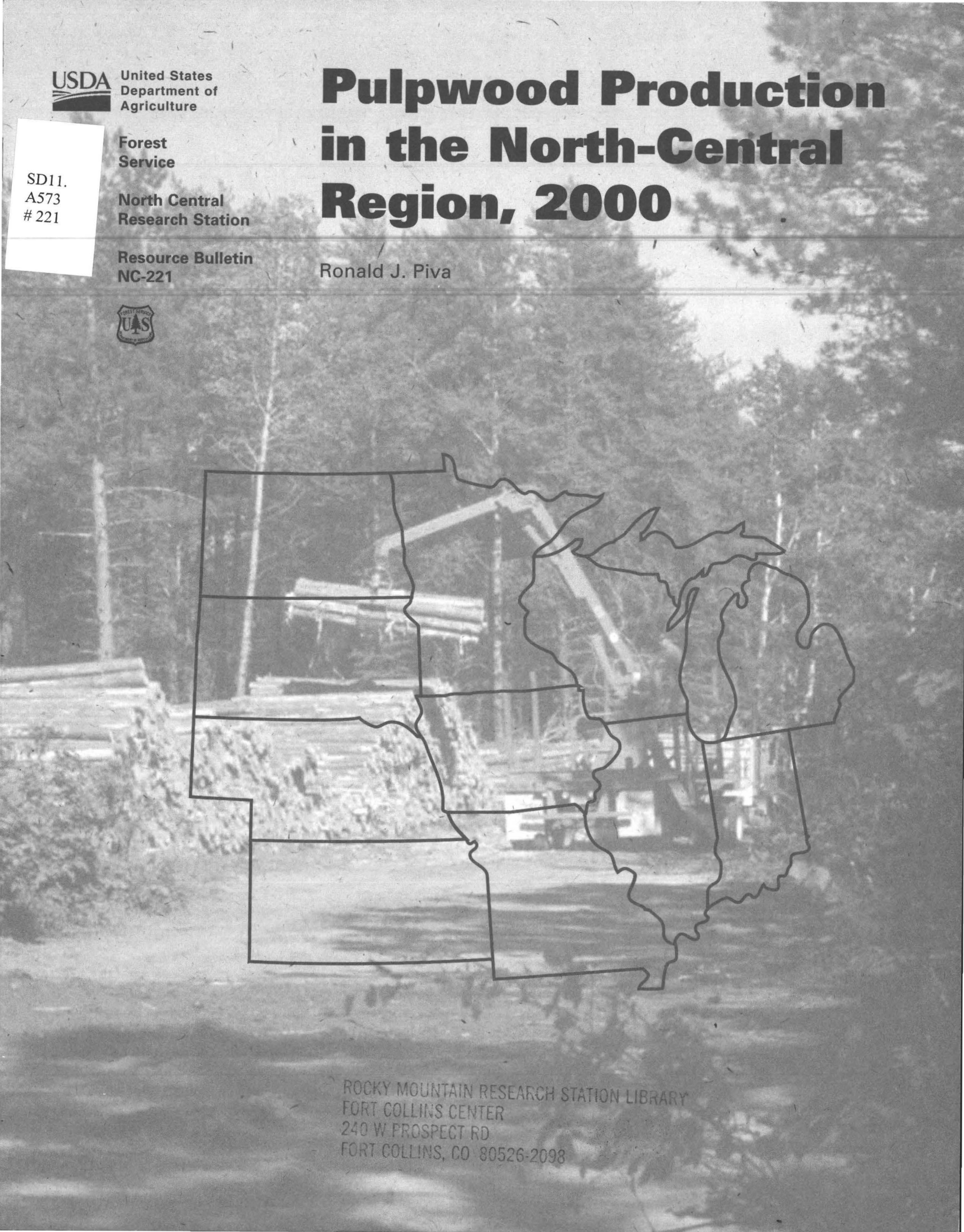
Pulpwood Production in the North-Central Region, 2000

Ronald J. Piva



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Pulpwood Production in the North-Central Region, 2000

Ronald J. Piva

NOTE: This report includes all primary products made from reconstituted wood fiber. In addition to wood pulp, this includes particleboard and engineered lumber products made from chips, shavings, wafers, flakes, strands, and sawdust. This report presents the production by county of the raw fiber material delivered to mills. Thus, these data report only that portion of the timber harvest used as raw material and do not necessarily reflect the volume of growing stock harvested.

Pulpwood constitutes more than half the industrial timber products harvested annually in the Lake States (Michigan, Minnesota, and Wisconsin) and is an important product in the Central States (Illinois, Indiana, Iowa, and Missouri) and the Plains States (Kansas, Nebraska, North Dakota, and South Dakota).

Current detailed information about pulpwood production[1] is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, forest industry development, and scientific studies.

Since 1979, we have included logs, bolts, and wood residue used in manufacturing flakeboard, waferboard, oriented strandboard, and medium density fiberboard in this annual report. Engineered lumber was first included in this report in 1992. Together, these products are called particleboard, and all mills manufacturing these boards are called particleboard mills in this report. Wood used at particleboard mills is identical or nearly identical to wood used at pulp mills; therefore, including this wood in our study provides a more accurate estimate of demand for pulpwood-like material.

Particleboard mills were in their infancy before 1979 and used primarily aspen and wood residue. Therefore, data for these mills do not distort roundwood use trends for other species or preclude comparing 2000 survey results with those of 1978 and previous years.

Pulp and particleboard mills using timber from the North Central States in 2000 reported their pulpwood receipts[2] by species group and county of origin. This report presents the results of the survey, analyzes the data, compares results with those of 1999 and earlier years, and discusses trends in pulpwood production and use.

The Lake States, Central States, and Plains States are discussed separately because the timber types in each area are different and the flow of wood between the areas is nominal. Lake States data are also presented by county, but more detailed data on pulpwood production and receipts in the Central and Plains States might reveal the operations of individual mills. This is the 42nd annual report of the pulpwood harvest in Lake States counties, the 41st annual report of the Central States harvest, and the 8th report of the pulpwood harvest in the Plains States.

About the Author:

Ronald J. Piva, Forester, received a B.S. in forest management from the University of Missouri-Columbia. He joined the Forest Service in 1987 and has been working with the North Central Station's Forest Inventory and Analysis unit since.

[1] *Pulpwood production, determined from mill receipts, is the annual volume of pulpwood cut, plus the annual wood residue volume produced by sawmills, veneer mills, etc. used for pulp, particleboard, waferboard, oriented strandboard, medium density fiberboard, or engineered lumber.*

[2] *Pulpwood receipts are the volumes of wood received by mills in a specific State or region, regardless of the geographic source.*

Several mills purchase their pulpwood based on weight rather than volume. Factors used to convert green tons of pulpwood to standard cord equivalents are shown in the appendix.

When new surveys are completed, errors and omissions from previous surveys are corrected. As a result of our ongoing efforts to improve the survey's efficiency and reliability, changes may have been made to the previous survey's data. All comparisons and analysis in this report are based on the reprocessed data from earlier surveys, which may not match earlier published data.

LAKE STATES

PRODUCTION

- Pulpwood production in the Lake States in 2000 was 9.6 million cords[3], only 2 thousand cords less than in 1999. Of each cord produced, 89 percent came from roundwood (including chips from roundwood) and 11 percent came from the residue[4] of wood-using plants (fig. 1).

- Hardwood material constituted 77 percent of the total pulpwood production.

- Principal species of roundwood harvested in 2000 were aspen (4.0 million cords), soft maple (714 thousand cords), hard maple (660 thousand cords), jack pine (570 thousand cords), and white birch (540 thousand cords) (table 1).

- Aspen remained the dominant species of roundwood harvested for pulpwood—47 percent of the total roundwood produced in the Lake States in 2000.

- Softwood roundwood production increased by 5 percent, from 1,751 thousand cords in 1999 to 1,833 thousand cords in 2000. Pulpwood production from softwood residues fell by 24 percent, from 452 thousand cords in 1999 to 344 thousand cords in 2000 (fig. 2).

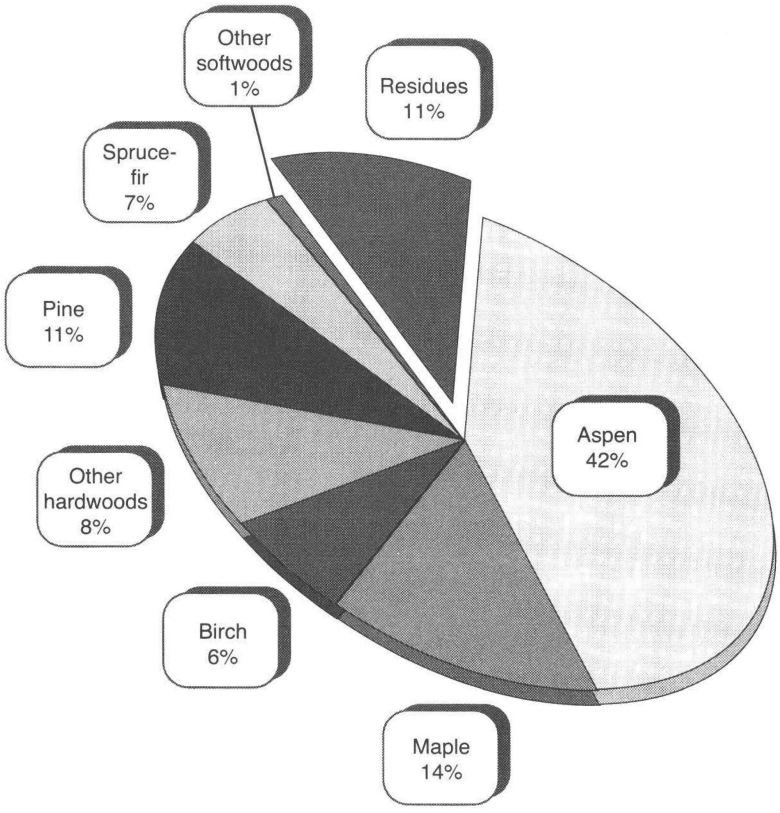


Figure 1.—*Lake States pulpwood production by species group and residues, 2000.*

[3] *All references to cords are in standard cords. A standard cord is 128 cubic feet of wood, bark, and air space.*

[4] *Residue is the byproduct from sawmills, veneer mills, cooperage mills, and other wood-using mills that is used for pulping and particleboard. Residue includes slabs, edgings, veneer cores, sawdust, fines, woodflour, and chips manufactured from slabs, edgings, and veneer cores.*

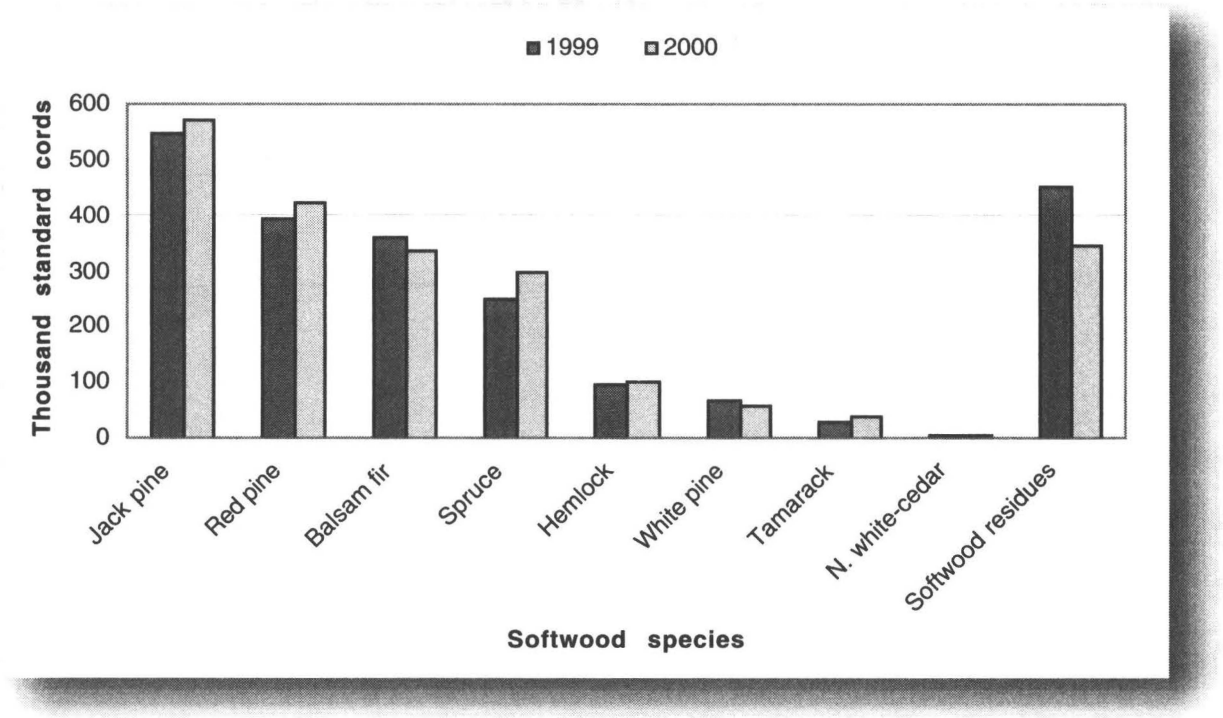


Figure 2.—*Softwood pulpwood production in the Lake States, 1999-2000.*

- Hardwood roundwood production decreased by less than 1 percent, from 6,732 thousand cords in 1999 to 6,712 thousand cords in 2000. Pulpwood production from hardwood residues rose by 7 percent during the same period (fig. 3).

- Whole-tree chip[5] (WTC) production made up 8 percent of the total pulpwood production or 747 thousand cords in the Lake States in 2000, an 11-percent increase from the previous year. Compared to 1999 production levels, hardwood WTC production in 2000 increased by 11 percent and softwood WTC production increased by 12 percent (fig. 4).

- Michigan was the major producer of WTC in the Lake States in 2000 with 480 thousand cords (64 percent of the WTC production) (fig. 5).

- Aspen was the predominant species used in WTC in 2000 with 308 thousand cords or 41 percent of the total WTC production.

- Jack pine, at 66 thousand cords, was the predominant softwood species used in WTC in 2000 and accounted for 9 percent of the total WTC production.

Michigan

- Michigan pulpwood production fell by 17 thousand cords to 3.1 million cords in 2000, a decrease of less then 1 percent from 1999 (fig. 6 and table 2).

- In 2000, hardwoods accounted for 78 percent of Michigan's pulpwood production.

- The Western Upper Peninsula was the top pulpwood-producing region in the State in 2000 with 43 percent of the roundwood pulpwood harvested (fig. 7 and table 3).

- Roundwood production for pulpwood in 2000 remained at the 1999 level of 2.6 million cords (table 4).

- From 1999 to 2000, roundwood pulpwood production increased by 6 percent in the Northern Lower Peninsula, increased by

[5] *Pulpwood produced from chipping entire trees (all portions of the trees above ground, except the stumps).*

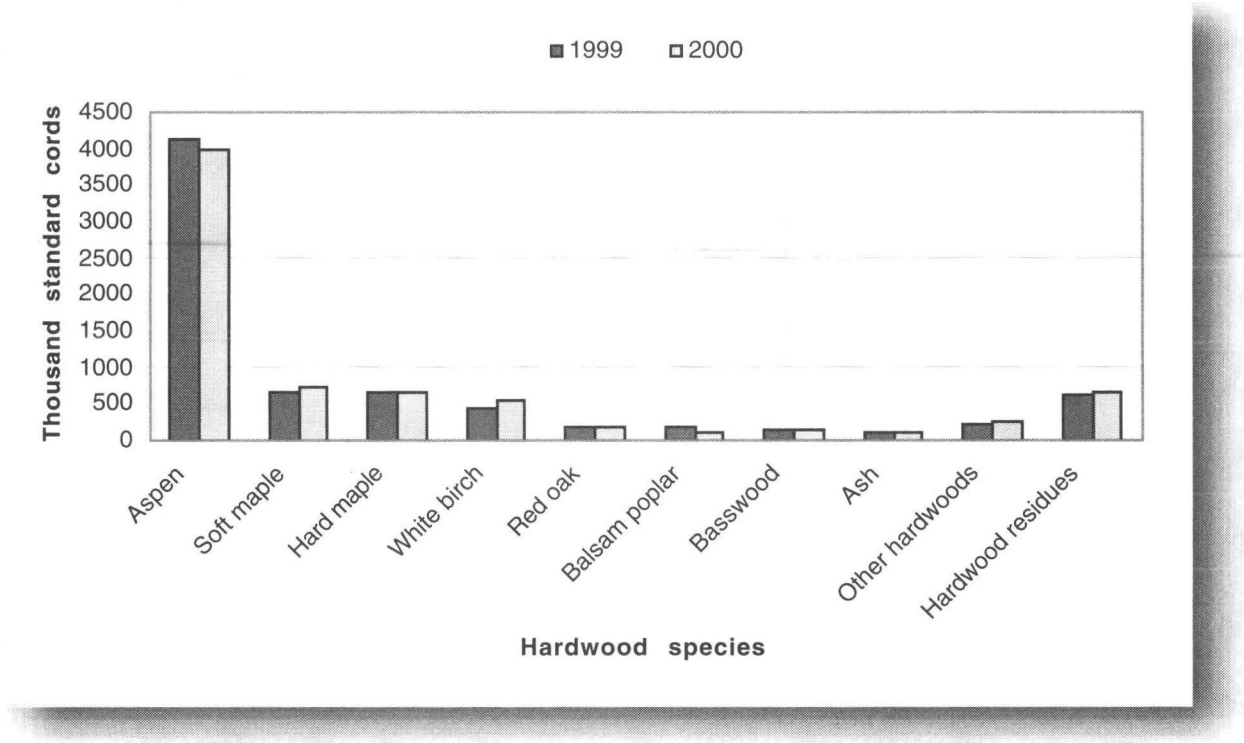


Figure 3.—*Hardwood pulpwood production in the Lake States, 1999-2000.*

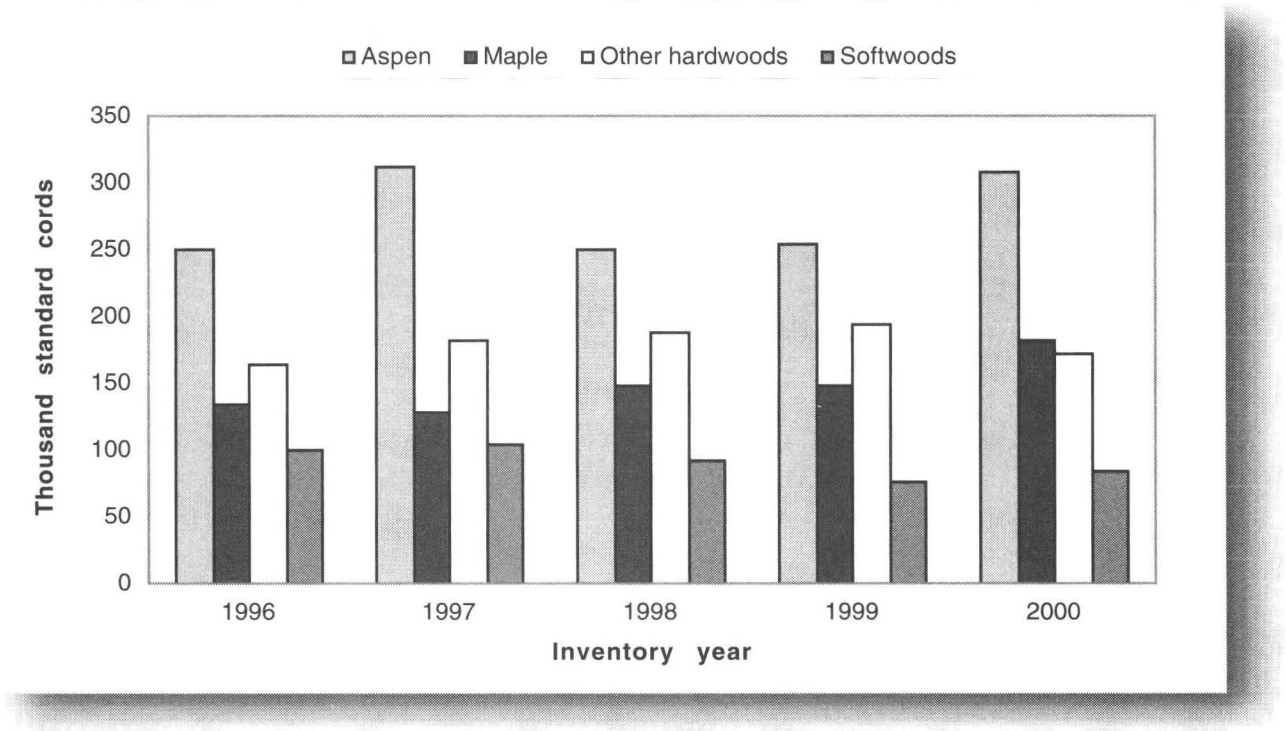


Figure 4.—*Whole-tree chip production in the Lake States, 1996-2000.*

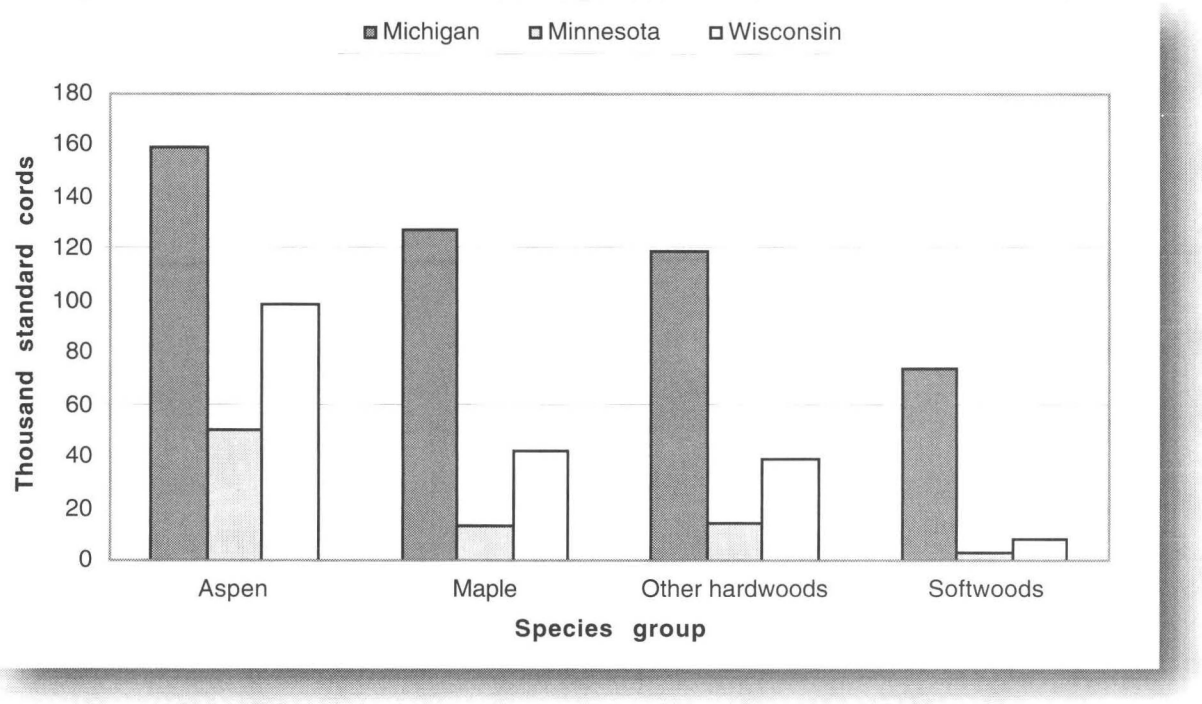


Figure 5.—*Whole-tree chip production by State in the Lake States, 2000.*

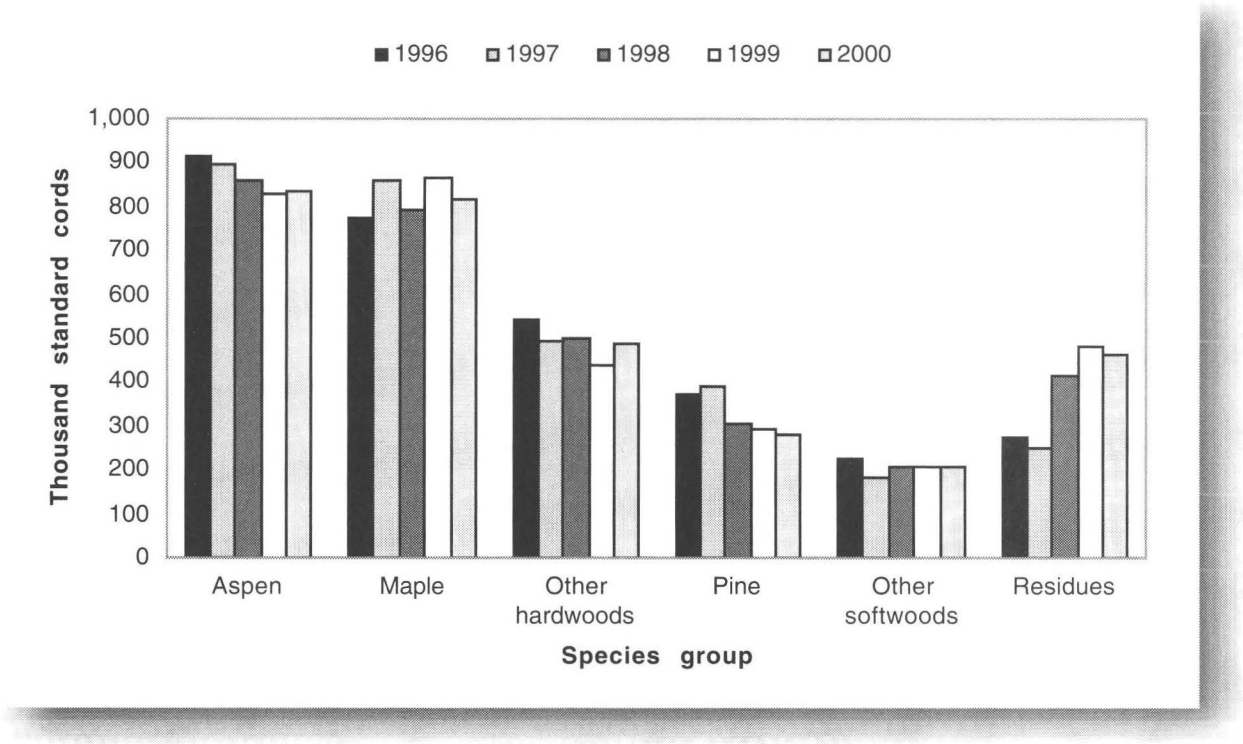


Figure 6.—*Michigan pulpwood production by species group and residues, 1996-2000.*

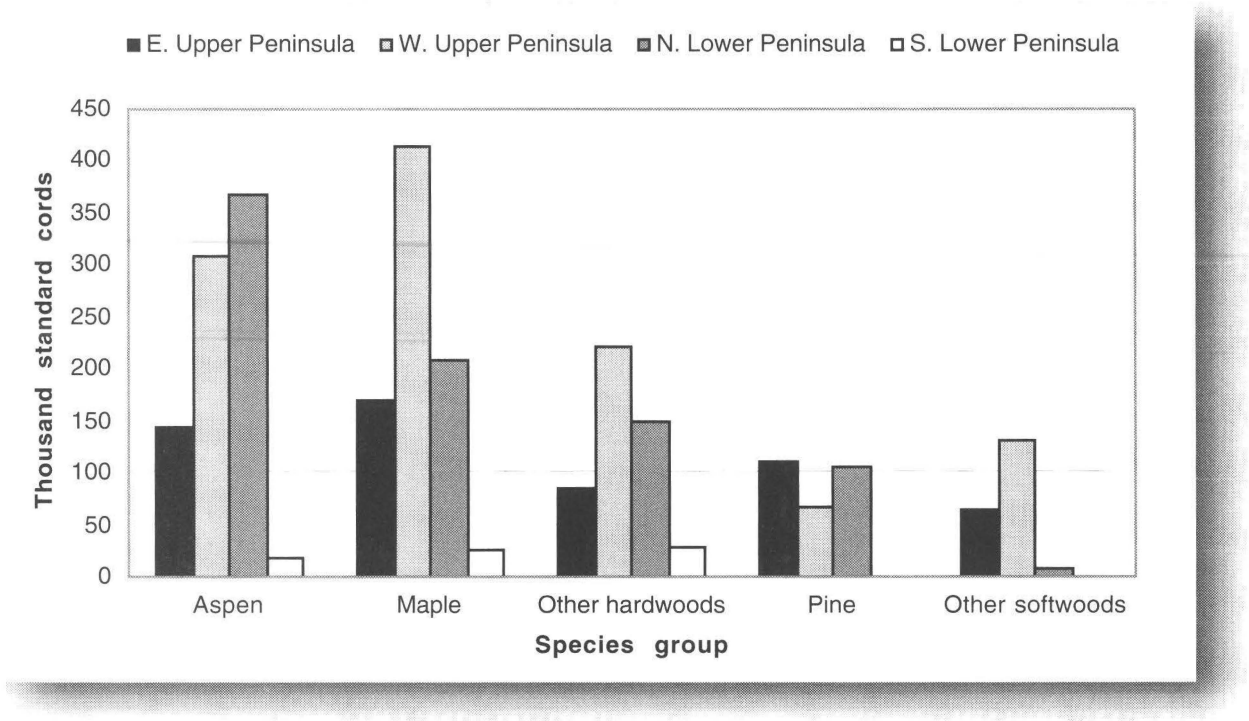


Figure 7.—*Michigan roundwood pulpwood production by Forest Survey Unit and species groups, 2000.*

2 percent in the Western Upper Peninsula, decreased by 8 percent in the Eastern Upper Peninsula, and decreased by 13 percent in the Southern Lower Peninsula.

- Marquette County in the Western Upper Peninsula was the top producer of roundwood pulpwood in the State with 277 thousand cords (table 5).

- The production of pulpwood from residues decreased by 4 percent from 1999 to 2000, falling from 483 thousand cords to 464 thousand cords.

Minnesota

- Pulpwood production decreased by 2 percent from 1999 to 2000, from 3.1 million cords to 3.0 million cords (fig. 8).

- Hardwoods accounted for 82 percent of the total pulpwood produced in 2000.

- Ninety-seven percent of the pulpwood was processed from roundwood sources.

- The Northern Pine and the Aspen-Birch Units were the top pulpwood-producing roundwood regions in the State in 2000 with 1.4 million cords and 1.2 million cords, respectively (fig. 9).

- St. Louis County in the Aspen-Birch Unit remained the top roundwood pulpwood-producing county with 599 thousand cords, followed by Itasca County in the Northern Pine Unit with 406 thousand cords (table 6).

- Aspen pulpwood production decreased by 5 percent between 1999 and 2000. Aspen accounted for 73 percent of all the roundwood harvested for pulpwood in Minnesota.

- From 1999 to 2000, pulpwood production from hardwood residues decreased by 39 percent and softwood residue use decreased by 32 percent. Overall, mill residues produced in Minnesota and used for pulpwood production decreased by 36 percent.

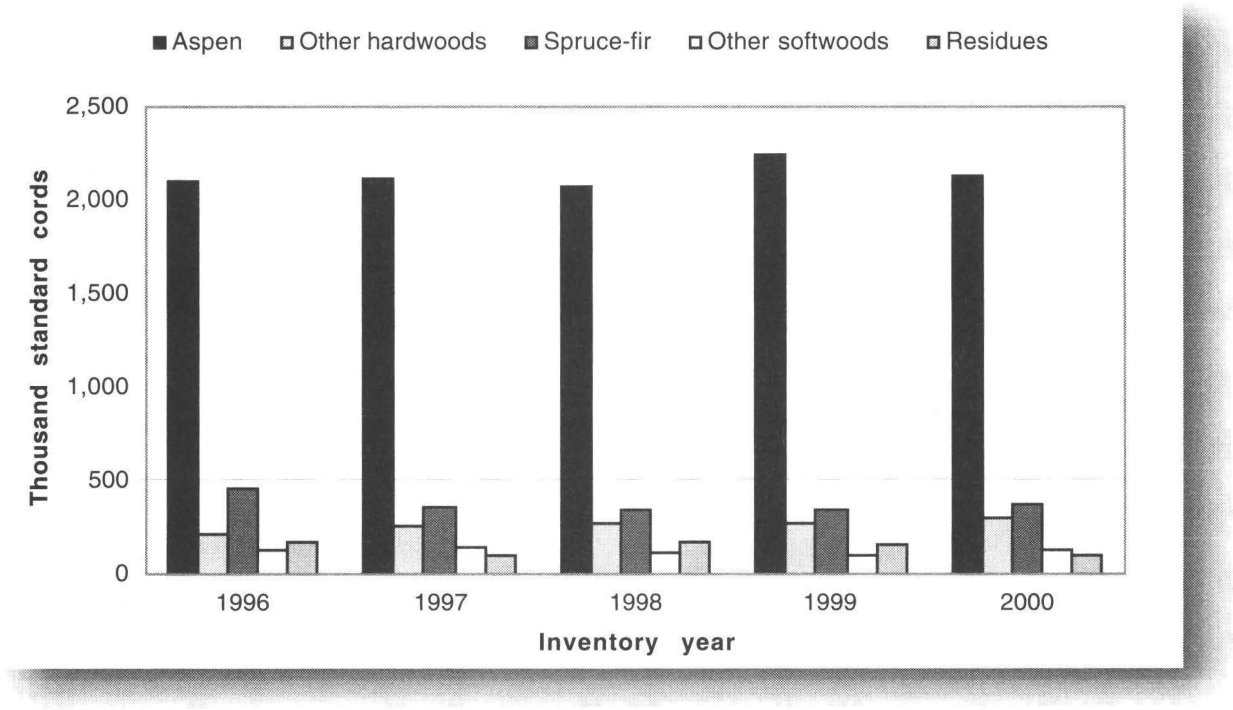


Figure 8.—*Minnesota pulpwood production by species group and residues, 1996-2000.*

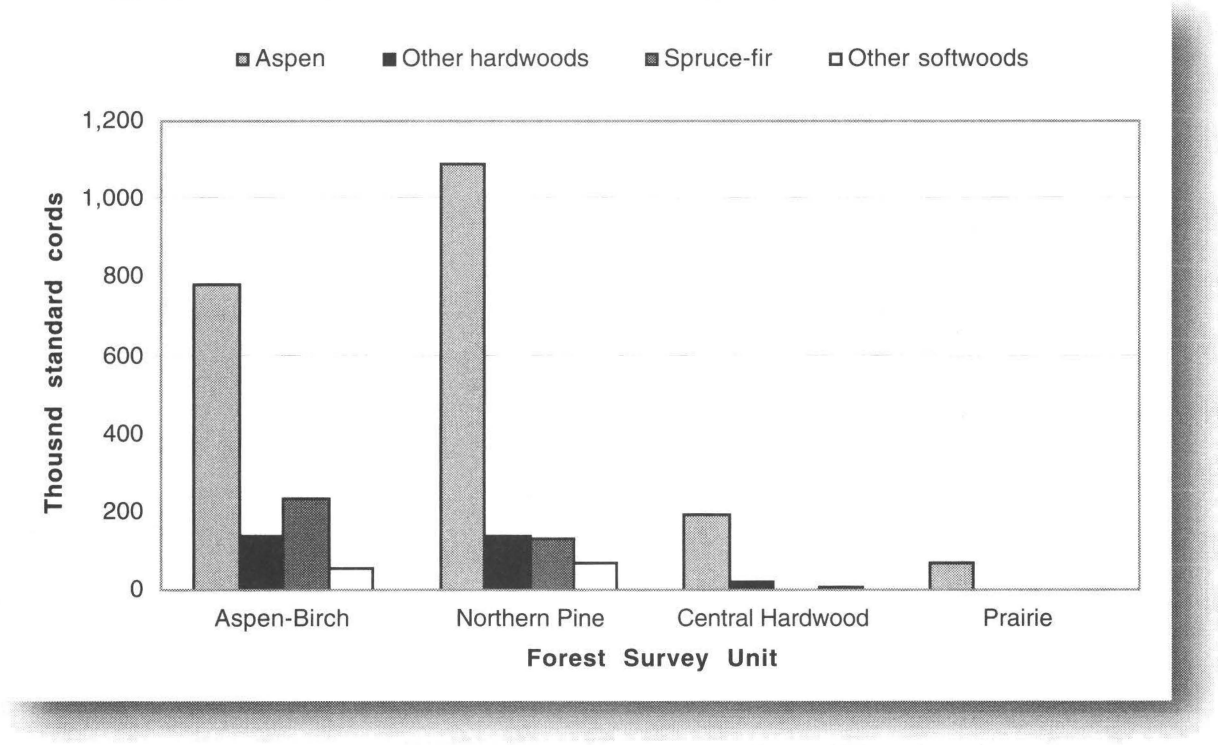


Figure 9.—*Minnesota roundwood pulpwood production by Forest Survey Unit and species group, 2000.*

Wisconsin

- Pulpwood production in Wisconsin increased by almost 3 percent from 1999 to 2000, to 3.4 million cords (fig. 10).
- Hardwood material accounted for 73 percent of the total pulpwood production in 2000.
- Roundwood harvested for pulpwood accounted for 87 percent of the pulpwood produced in 2000.
- The Northwestern Forest Survey Unit remained the top producer of roundwood pulpwood in the State with 1.2 million cords (fig. 11).
- Douglas County replaced Bayfield County in 2000 as the top pulpwood-producing county in the State with 196 thousand cords (table 7).
- Between 1999 and 2000, aspen pulpwood harvests decreased by 3 percent, but aspen still accounted for one-third of the total roundwood harvested for pulpwood in 2000.
- In 2000, the use of hardwood residues for pulpwood increased by 11 percent from the previous year, while the use of softwood residues decreased by almost 21 percent.

Harvesting Intensity

- In the following figures, the distribution of the harvest is shown in two ways: first, the amount of pulpwood cut relative to the growing-stock volume in each of five major pulpwood species (fig. 12); second, the amount of pulpwood relative to commercial timberland area (fig. 13).

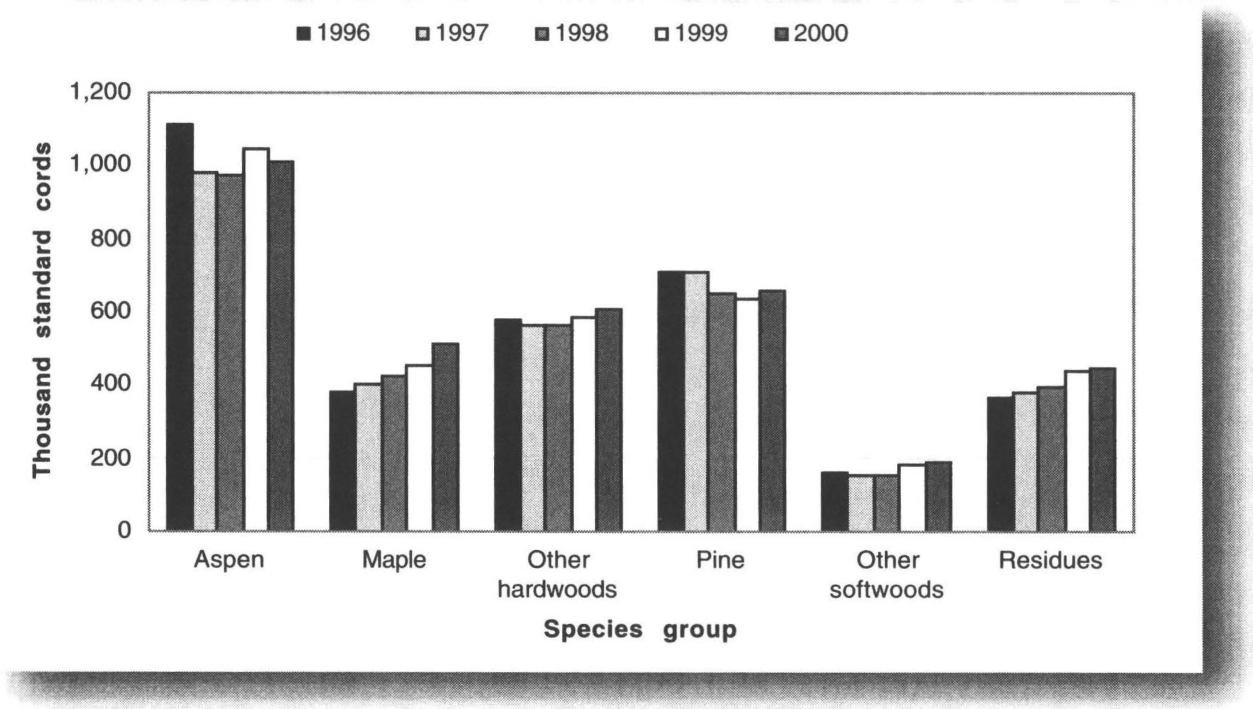


Figure 10.—*Wisconsin pulpwood production by species group and residues, 1996-2000.*

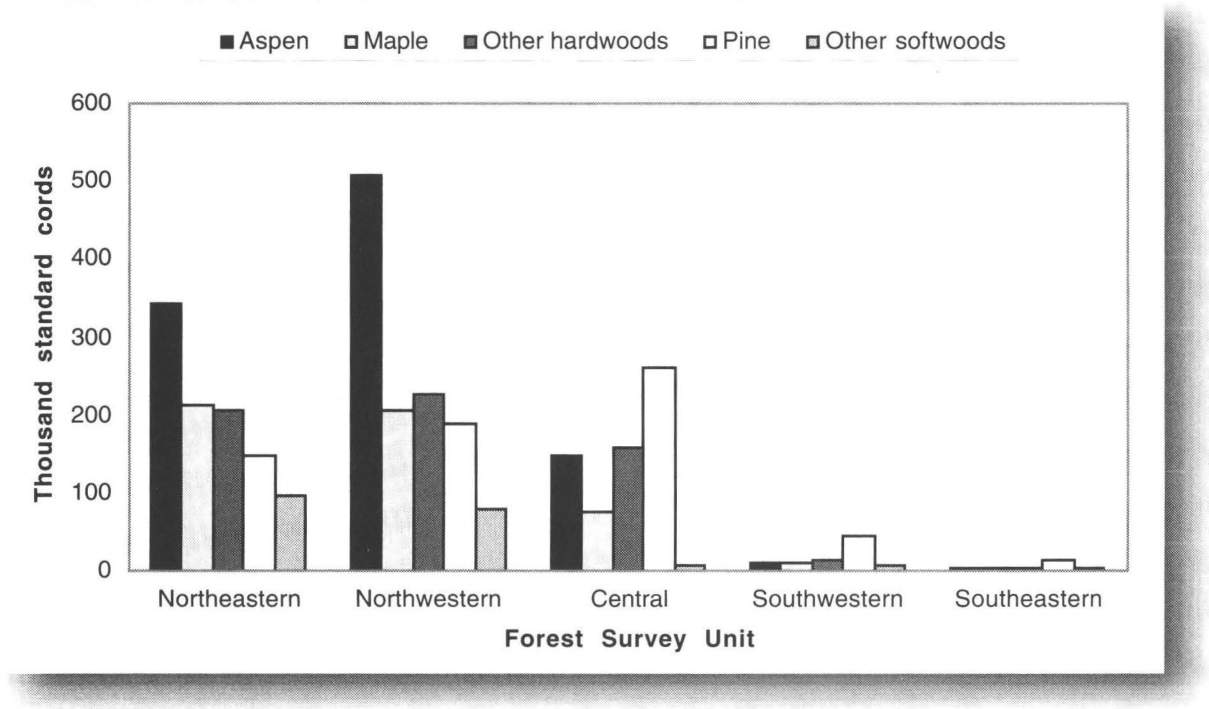


Figure 11.—*Wisconsin roundwood pulpwood production by Forest Survey Unit and species group, 2000.*

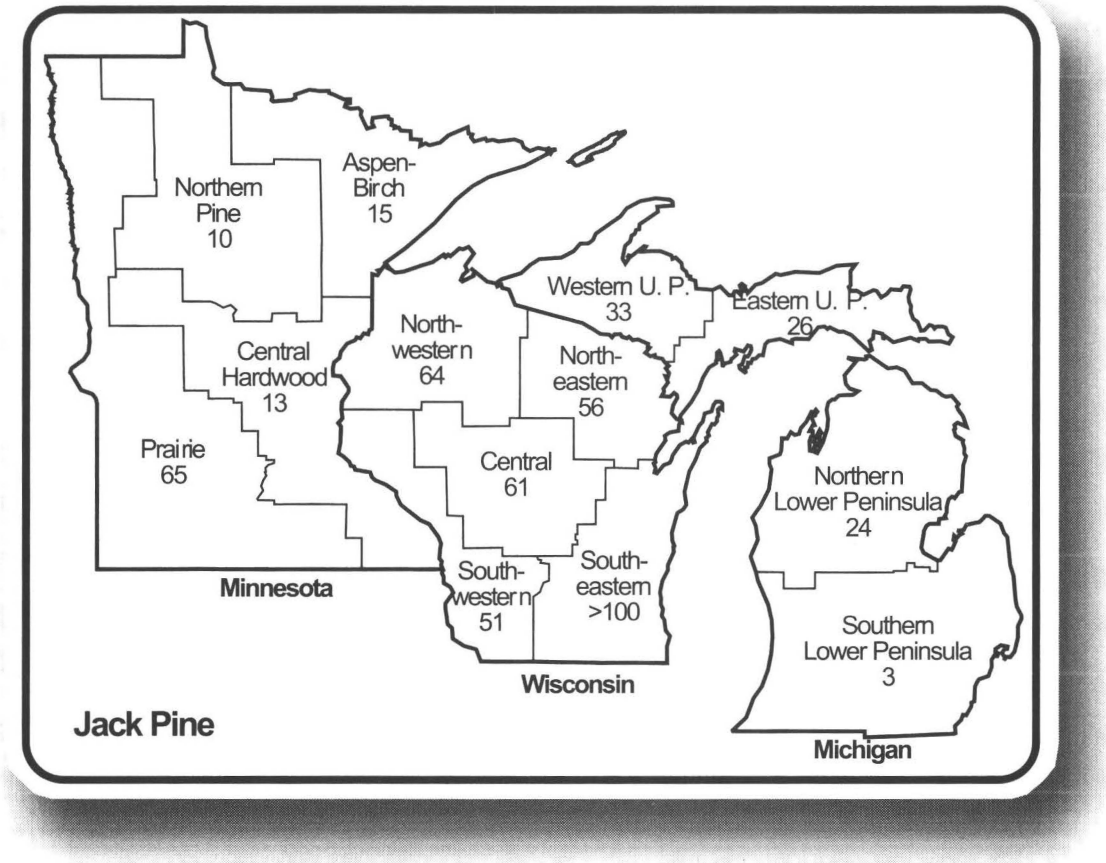
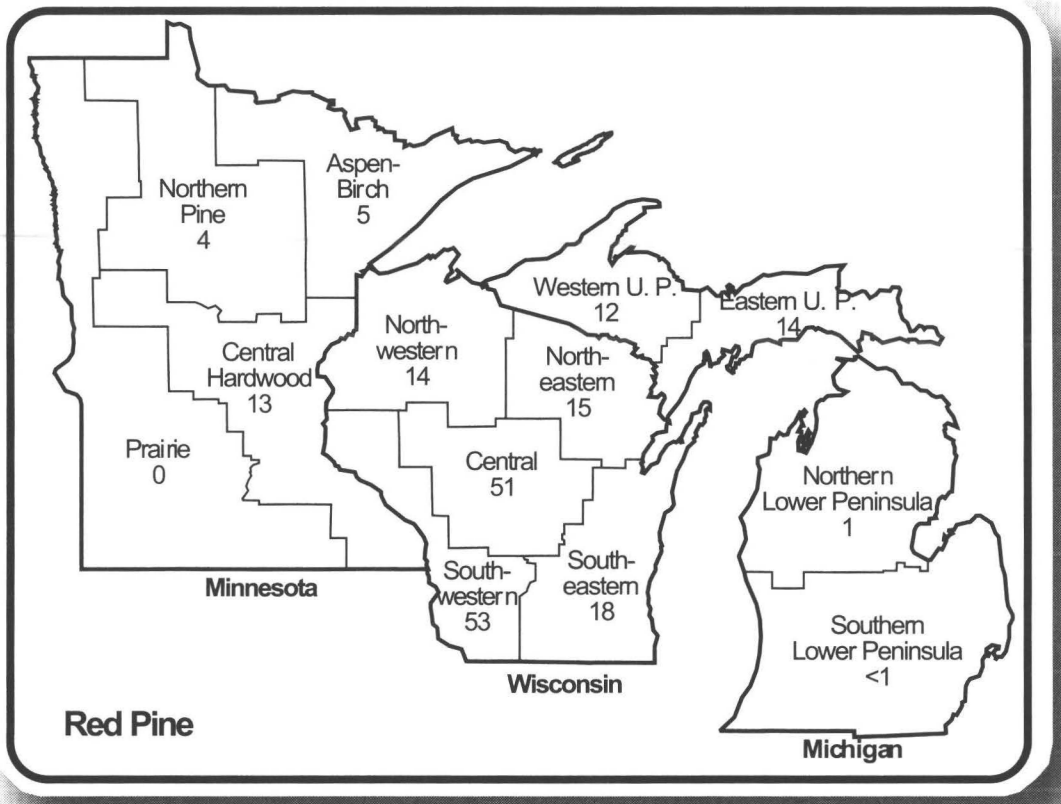


Figure 12.—*Cords of roundwood pulpwood (including chips from roundwood) harvested per 1,000 cords of growing-stock volume for each of five principal pulpwood species by Forest Survey Unit, 2000. Growing-stock volume was determined during the last forest inventory for each State.*


Northern
Pine
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Aspen-
Birch
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Western U. P.
12
Eastern U. P.
14
North-
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North-
eastern
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Central
Hardwood
13
Prairie
0
Central
51
Northern
Lower Peninsula
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South-
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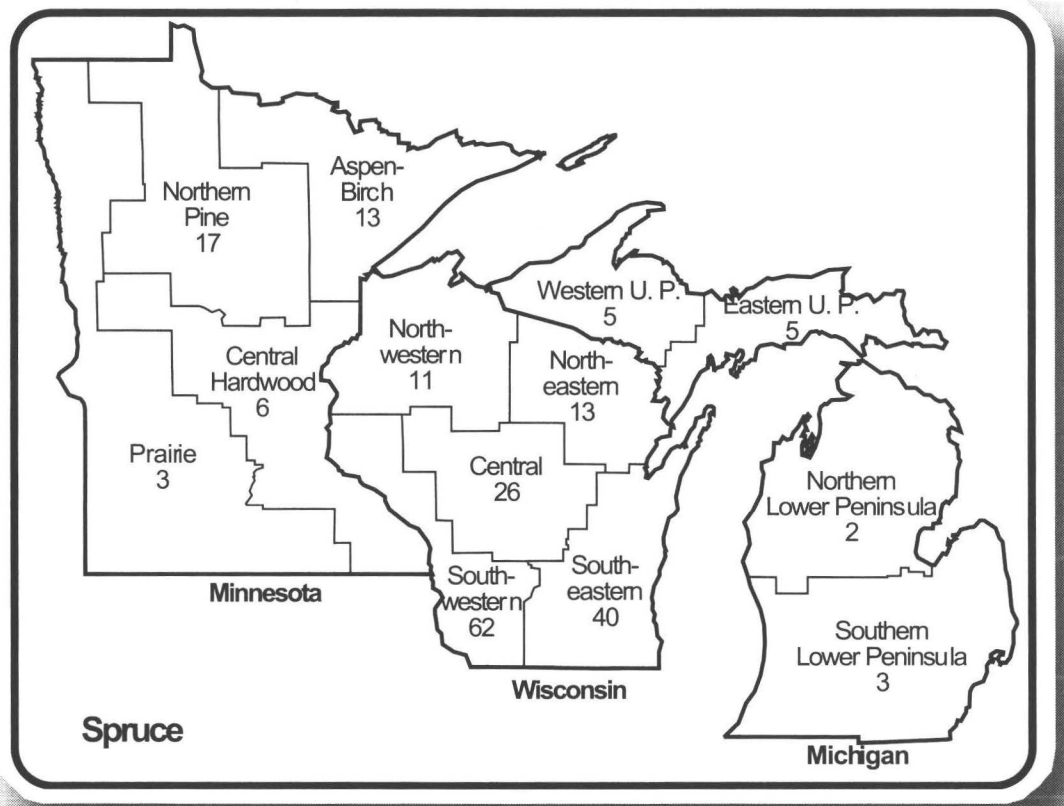
South-
eastern
18
Southern
Lower Peninsula
<1
Minnesota
Wisconsin
Michigan
Red Pine


Northern
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Central
Hardwood
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Prairie
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South-
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Southern
Lower Peninsula
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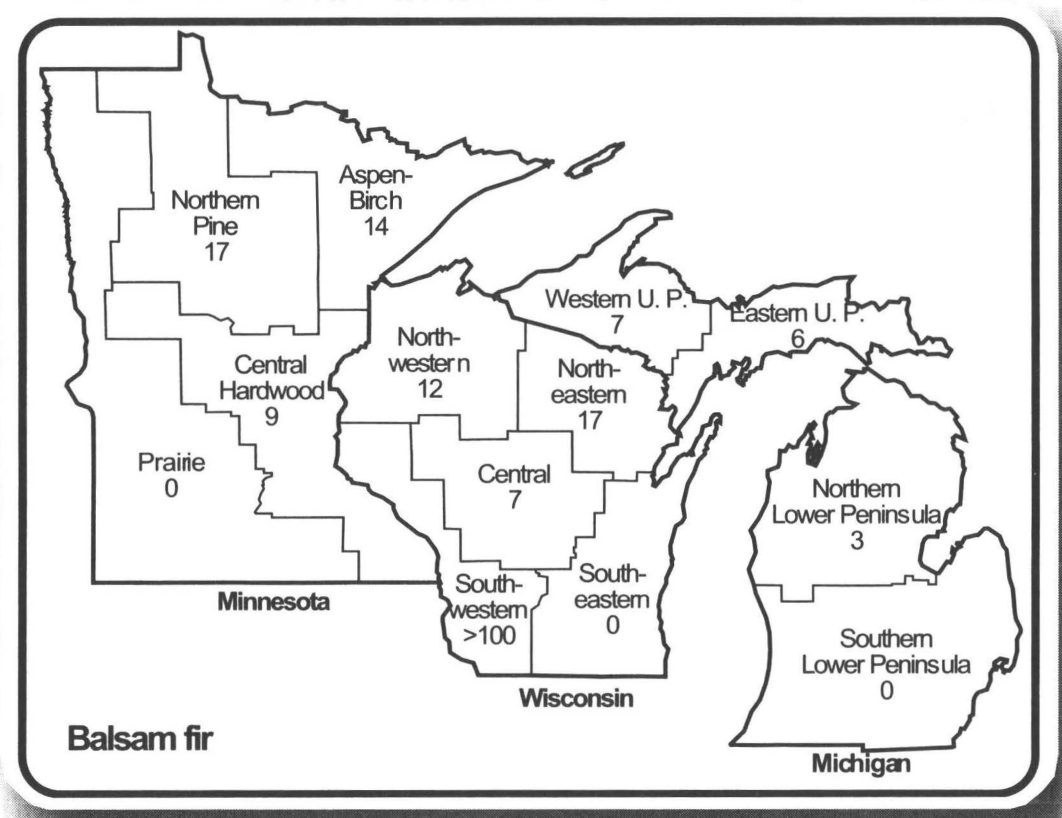
Minnesota
Wisconsin
Michigan
Spruce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Minnesota
Wisconsin
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Lower Peninsula
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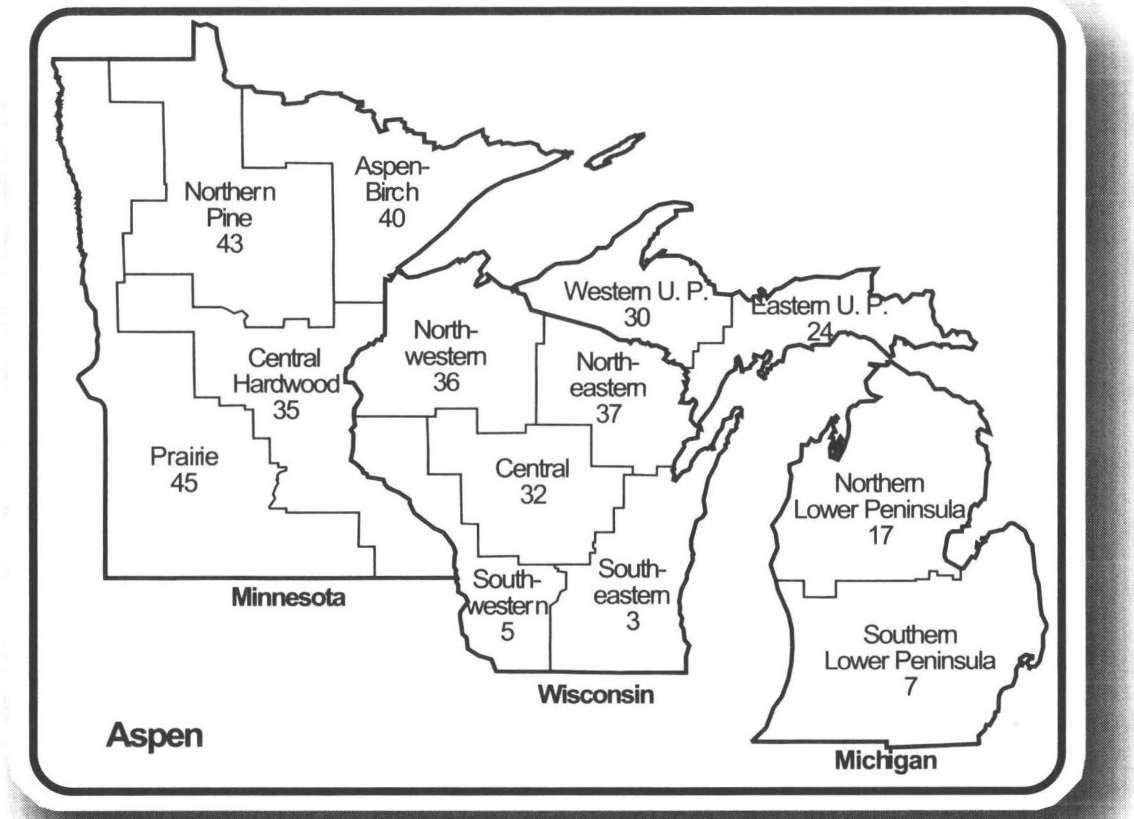
Michigan
Balsam fir


Northern
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Aspen-
Birch
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Western U. P.
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Eastern U. P.
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North-
western
36
North-
eastern
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Central
Hardwood
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Prairie
45
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Minnesota
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Southern
Lower Peninsula
7
Michigan
Aspen

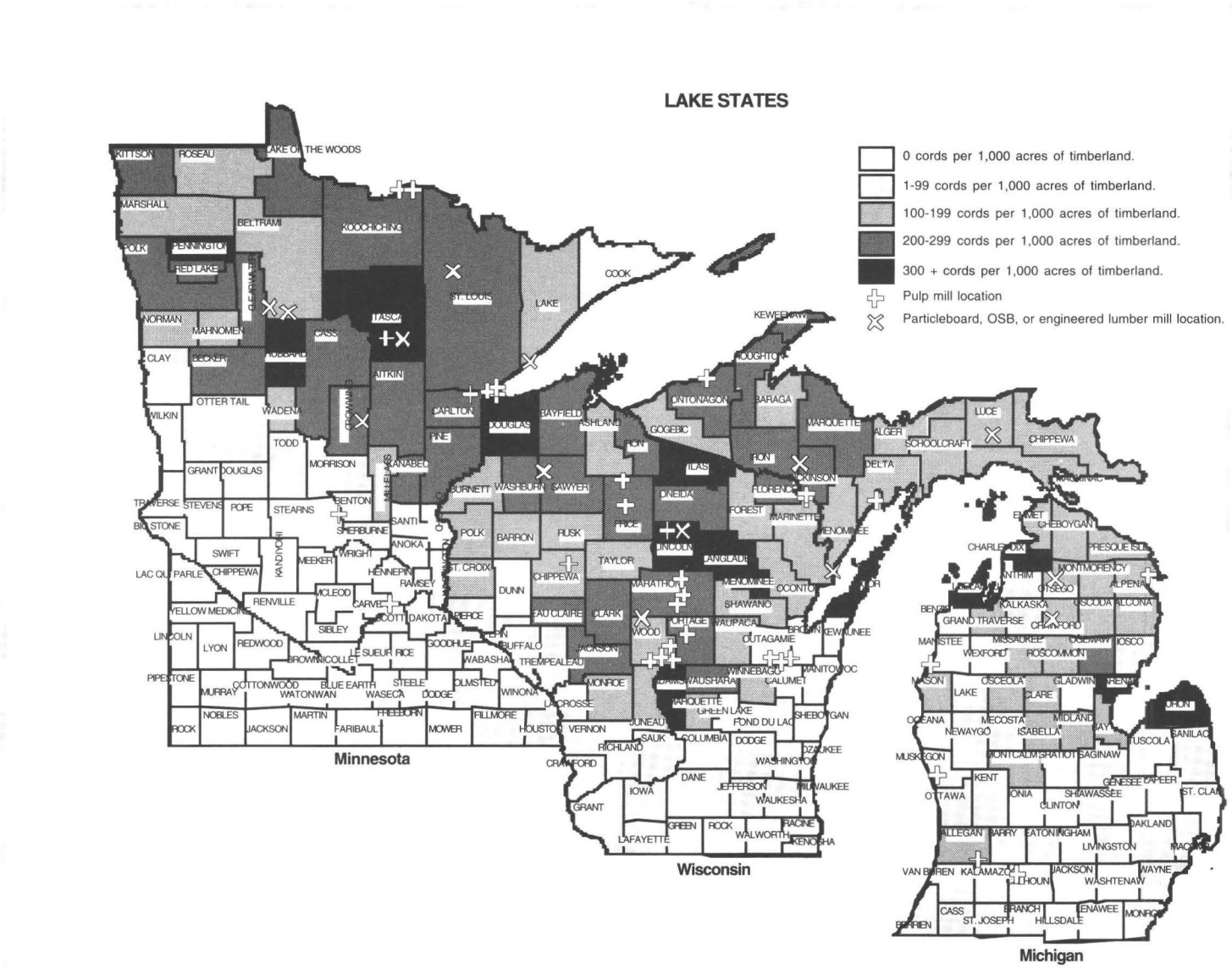
LAKE STATES
0 cords per 1,000 acres of timberland.
1-99 cords per 1,000 acres of timberland.
100-199 cords per 1,000 acres of timberland.
200-299 cords per 1,000 acres of timberland.
300 + cords per 1,000 acres of timberland.
Pulp mill location
Particleboard, OSB, or engineered lumber mill location.
Minnesota
Wisconsin
Michigan

Figure 13.—*Cords of pulpwood cut per 1,000 acres of timberland by county, 2000. Acres of timberland (stocking of trees greater than 10 percent) were determined during the last inventory in each State. Locations of active pulp and particleboard mills are shown.*

Pulpwood harvesting was most intensive (100,000 cords or more) in the following Forest Survey Units by species:

Species	State	Forest Survey Unit
Balsam fir	Minnesota	Aspen-Birch
Jack pine	Wisconsin	Northwestern
Red pine	Wisconsin	Central
Spruce	Minnesota	Aspen-Birch
Aspen	Michigan	N. Lower Peninsula, W. Upper Peninsula, E. Upper Peninsula
	Minnesota	Northern Pine, Aspen-Birch, Central Hardwood
	Wisconsin	Northwestern, Northeastern, Central
White birch	Wisconsin	Northwestern
Hard maple	Michigan	W. Upper Peninsula
	Wisconsin	Northwestern, Northeastern
Soft maple	Michigan	W. Upper Peninsula, N. Lower Peninsula

RECEIPTS

- In 2000, 33 woodpulp and 14 particleboard mills in the Lake States acquired 9.9 million cords of pulpwood, an increase of 2 percent from 1999.
- Aspen roundwood was processed at 37 of the 47 pulp and particleboard plants in the Lake States in 2000 (fig. 14 and table 8).
- In 2000, Wisconsin supplied wood to 37 mills, Michigan supplied 34 mills, and Minnesota supplied 27 mills.
- Total imports from outside the Lake States of all wood material in 2000 were 443 thousand cords, an increase of 46 percent from 1999. Canada contributed 75 percent of the total import receipts.

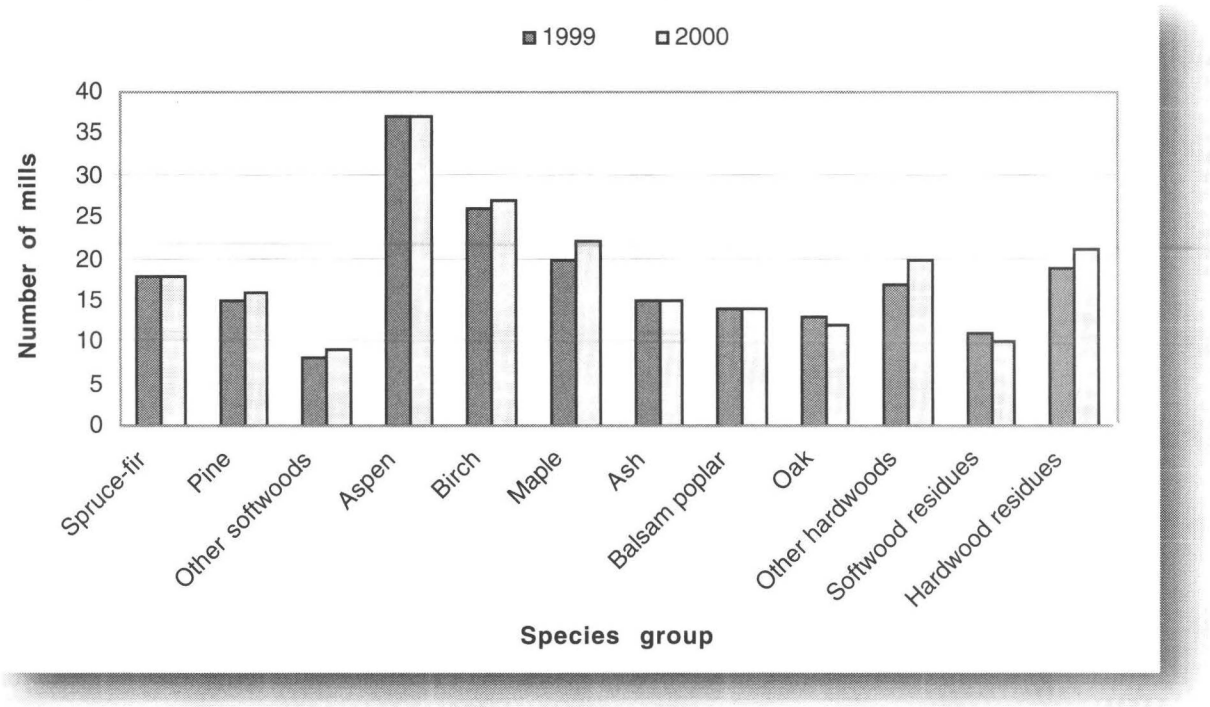

Figure 14.—*Numbers of industrial plants in the Lake States using a particular species or residue for pulping and particleboard, 1999-2000.*

- Imports of aspen roundwood from Canada to Lake States pulp and particleboard mills nearly doubled in 2000, going from 114 thousand cords in 1999 to 222 thousand cords in 2000.

- Imports of residues decreased by 8 percent in 2000. The Plains States supplied almost 40 percent of the total residues imported by mills in the Lake States.

Michigan

- The eight Michigan pulp mills, three OSB mills, and one particleboard mill consumed 3.0 million cords in 2000, up 1 percent from the previous year. Eight percent of the total wood material consumed was imported from out of State, mainly from Wisconsin.

Minnesota

- The eight pulp mills, five OSB mills, and one laminated structural lumber mill in Minnesota reported consuming an estimated 3.2 million cords in 2000, an increase of 5 percent from 1999. Minnesota's pulp and particleboard mills acquired 12 percent of their raw material from out-of-State sources. Canada supplied 58 percent of the imported wood material.

Wisconsin

- The 17 pulp mills, 2 OSB mills, and 2 particleboard mills in Wisconsin consumed 3.7 million cords in 2000, a decline of less than 6 thousand cords from 1999. Eighteen percent of the total receipts were imported from out of State. Imports from Michigan and Minnesota accounted for 42 percent and 32 percent of the total imports, respectively.

INDUSTRY TRENDS AND ANALYSIS

Pulp Mills

For this section, pulp mill products include wood fiber products such as paper, paperboard, hardboard, insulation board, and medium-density fiberboard. All of these products are manufactured from wood that has been reduced to individual fibers, small fiber bundles, or fiber parts that are subsequently formed into a mat. Wood material from the Lake States sent to mills in other States and Canada is included.

- Of the 9.9 million cords of pulpwood processed in 2000, 7.2 million cords (72 percent) were used for wood pulp products. Of each cord used to produce pulp, 87 percent came from roundwood and 13 percent came from mill residues.

- Principal species harvested for pulp in the Lake States in 2000 were aspen (2,045 thousand cords), hard maple (620 thousand cords), soft maple (619 thousand cords), jack pine (447 thousand cords), and white birch (409 thousand cords) (fig. 15).

- Hardwoods were still the mainstays of the pulp mills in the region in 2000 with hardwood roundwood contributing 63 percent of total production and hardwood residues supplying another 8 percent.

- The use of softwood roundwood by the pulp mills in the Lake States increased by 6 percent from 1999 to 2000. Softwood residue use, on the other hand, decreased by 14 percent from the previous year.

- Average daily woodpulp production in 2000 fell to 14.5 thousand tons of pulp per day, down from 15.1 thousand tons per day in 1999 (table 9).

- Lake States pulpwood production for pulp mills during 1996-2000 ranged from a low of 6.5 million cords in 1998 to a high of 6.9 million cords in 2000 (table A).

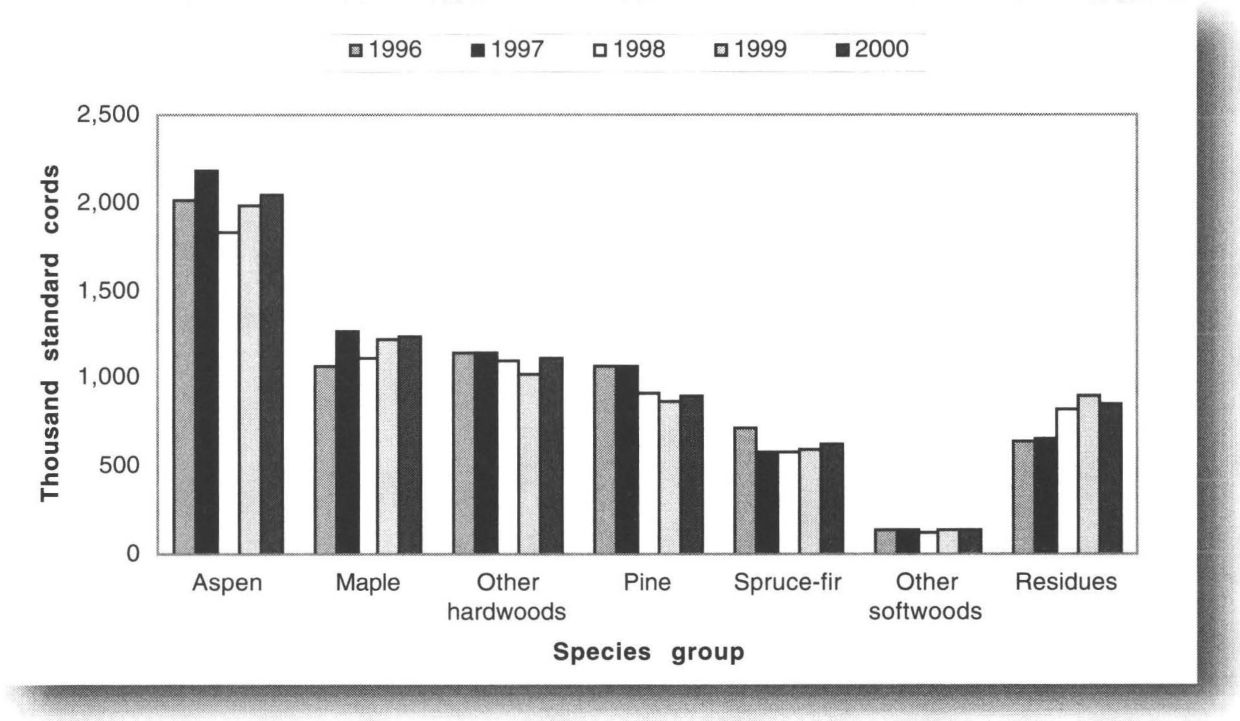

Figure 15.—*Pulpwood production in the Lake States for pulp by species group and residues, 1996-2000.*

Table A.—*Lake States pulpwood production for pulp mills, 1996-2000*

Product form and species group	Production				
	1996	1997	1998	1999	2000
	(Thousand cords)				
Roundwood					
Softwoods	1,920	1,788	1,627	1,599	1,674
Aspen	2,018	2,036	1,825	1,981	2,045
Other hardwoods	2,209	2,268	2,198	2,232	2,354
Residue	630	649	813	867	852
Total	6,778	6,741	6,463	6,680	6,925

Michigan

- Pulpwood production for wood pulp was 2.2 million cords in 2000, down by less than 1 percent from 1999.

- Soft maple and hard maple were the two major pulpwood species groups harvested in the State in 2000 with 361 thousand cords and 347 thousand cords, respectively. Other major species harvested were aspen with 298 thousand cords and white birch with 119 thousand cords.

- Michigan mills imported 162 thousand cords of pulpwood, or 8 percent of the wood material used for the production of wood pulp. Michigan exported 283 thousand cords to wood pulp mills in Minnesota, Wisconsin, and Canada.

- Michigan mills used 1,642 thousand cords of hardwood material in 2000, a decrease of 2 percent from 1999. The use of softwood material increased by 13 percent to 392 thousand cords during the same period.

Minnesota

- Pulpwood production for wood pulp totaled 1.8 million cords in 2000, an increase of 8 percent from 1999.

- In 2000, aspen remained the predominant species harvested in the State with 1,084 thousand cords, or 63 percent of the total roundwood produced. Other major species were balsam fir with 184 thousand cords and spruce with 182 thousand cords.

- Mills in Minnesota imported 313 thousand cords of wood material for pulp products (157 thousand cords from Canada, 149 thousand cords from Wisconsin, and 7 thousand cords from Michigan). Minnesota exported 159 thousand cords to pulp mills in Wisconsin, 15 thousand cords to pulp mills in Canada, and 6 thousand cords to pulp mills outside of the Lake States.

- Minnesota mills had a 22-percent increase in the use of hardwood material, from 1,215 thousand cords in 1999 to 1,482 thousand cords in 2000. The use of softwood material increased by 6 percent to 464 thousand cords in 2000.

Wisconsin

- Pulpwood production for wood pulp products increased by 4 percent, from 2.8 million cords in 1999 to 3.0 million cords in 2000.

- Aspen was the main species harvested with 662 thousand cords. Other major species harvested were red pine (303 thousand cords), jack pine (291 thousand cords), hard maple (264 thousand cords), white birch (230 thousand cords), and soft maple (224 thousand cords).

- Wisconsin mills imported 558 thousand cords of pulpwood: 249 thousand cords from

Michigan, 160 thousand cords from Minnesota, 93 thousand cords from other States, and 56 thousand cords from Canada. Wisconsin exported 147 thousand cords to Michigan, 149 thousand cords to Minnesota, and 6 thousand cords to other States and Canada combined.

- Wisconsin pulp mills increased the use of both hardwood material by 5 percent between 1999 and 2000, and decreased the use of softwood material by 3 percent.

Particleboard Mills

Particleboard is a generic term for a panel manufactured from lignocellulosic material—commonly wood—essentially in the form of particles (as distinct from fibers). These materials are bonded together with synthetic resin or other suitable binder under heat and pressure by a process wherein the inter-particle bonds are created wholly by the added binder. Other materials may have been added during manufacture to improve certain properties. The many types of particleboard differ greatly in regard to size and geometry of the particle, the amount of resin (adhesive) used, and the density to which the panel is pressed. The major types of particles used for particleboard are shavings, flakes, wafers, chips, sawdust, strands, slivers, and wood wool (excelsior). Much of the particleboard in the U.S. is made from residues (shavings, sawdust, or chips), but some types require that roundwood (saw logs or pulpwood) be used. Waferboard and oriented strandboard are examples of products requiring that the particles be cut from solid wood. A new product called engineered lumber was added to this generic term in 1992. Wood material from the Lake States sent to mills in other States and Canada is included.

- The Lake States produced 2.6 million cords of pulpwood in 2000 for particleboard products, down 9 percent from 1999. For every cord of pulpwood used in particleboard manufacture, 94 percent came from roundwood and 6 percent came from the residues of other wood-using plants.

- Principal species harvested for particleboard products were aspen (1,929 thousand cords), white birch (131 thousand cords), jack pine (123 thousand cords), and soft maple (94 thousand cords) (fig. 16).

- In 2000, the Lake States produced 160 thousand cords of softwood roundwood and 2,313 thousand cords of hardwood roundwood for processing at particleboard plants. Roundwood production for the manufacture of particleboard products fell by 7 percent between 1999 and 2000. All the roundwood that was harvested in the Lake States for particleboard production stayed in the region.

- The Lake States in 2000 produced 42 thousand cords of softwood residues and 114 thousand cords of hardwood residues for use in particleboard production. The use of residues for particleboard production decreased by 24 percent from 1999 to 2000.

- Annual production at Lake States particleboard plants rose from 1,951 million square feet 3/4-inch basis in 1999 to 2,019 million square feet 3/4-inch basis in 2000 (table 10).

- Lake States pulpwood production for particleboard mills during 1996-2000 ranged from a low of 2.5 million cords in 1997 to a high of 2.9 million cords in 1999 (table B).

Michigan

- In 2000, pulpwood harvested from Michigan for particleboard products totaled 851 thousand cords, of which 114 thousand cords were softwoods and 737 thousand cords were

Figure 16.—*Pulpwood production for particleboard in the Lake States, 1996-2000.*

hardwoods. Residues used for particleboard products added another 91 thousand cords of wood material.

- The particleboard mills in Michigan imported 48 thousand cords from Wisconsin, 39 thousand cords from Canada, and 3 thousand cords from the Central States. Twenty-three thousand cords of wood material was exported to Wisconsin particleboard mills.

Minnesota

- Minnesota accounted for almost half (47 percent) of all the wood material produced in the Lake States for particleboard plants in 2000. Timber logged for particleboard products totaled 1.2 million cords, and aspen was the predominant species cut (1.0 million cords). Minnesota supplied less than 3 thousand cords of mill residues for particleboard production.

- The particleboard mills in Minnesota imported 62 thousand cords from Canada and 2 thousand cords from Wisconsin and North Dakota combined. In 2000, raw materials exported from the State for particleboard manufacturing totaled 52 thousand cords, all of which went to Wisconsin.

Table B.—*Lake States pulpwood production for particleboard mills, 1996-2000*

Product form and species	Production				
	1996	1997	1998	1999	2000
	(Thousand cords)				
Roundwood					
Softwoods	146	161	135	152	159
Aspen	2,102	1,946	2,078	2,139	1,939
Other hardwoods	281	306	362	380	374
Residue	179	86	172	205	156
Total	2,708	2,499	2,748	2,876	2,628

Wisconsin

- In 2000, Wisconsin produced 400 thousand cords of roundwood pulpwood for particleboard manufacturing, of which 12 thousand cords were softwood and 388 thousand cords were hardwood. Wisconsin wood processing mills provided an additional 63 thousand cords of plant byproducts to the particleboard industry.

- The mills in Wisconsin imported almost 93 thousand cords of wood for particleboard manufacturing: 52 thousand cords from Minnesota, 23 thousand cords from Michigan, and 18 thousand cords from Canada. Wisconsin exported 48 thousand cords to Michigan particleboard mills and 2 thousand cords to Minnesota particleboard mills in 2000.

Industry News

Major mill expansion, new construction, consolidations, name changes, and closures are as follows:

- In 1999, Aspen Bay Pulp and Fibre began building the first bleached chemi-thermomechanical pulp mill in the U.S. in Menominee, MI. The 215,000-tons per year mill should be finished in late 2002.

- Georgia-Pacific Corp. in Duluth, MN, closed its pulp mill in March of 1999.

- The TENNECO Packaging mills in Filer City, MI, and Tomahawk, WI, were purchased by and their names were changed to Packaging Corporation of America in 1999.

- Thilmany Paper in Kaukauna, WI, was purchased by and its name was changed to International Paper Co. in 1999.

- ABT Co. in Alpena, MI, was purchased by and its name was changed to Louisiana-Pacific Corp. in February of 1999.

- Consolidated Papers, Inc., plants in Duluth, MN, and in Biron, Kimberly, Niagara, Stevens Point, and Wisconsin Rapids, WI, were purchased by and their names were changed to Stora Enso North America in 2000.

- Weyerhaeuser Co. acquired a controlling interest in TJ International, the major owner and managing partner of Trus Joist MacMillan, in January of 2000. Because of the strong brand identity associated with Trus Joist, Weyerhaeuser will continue to market its line of engineered wood products from the Deerwood, MN, plant under the Trus Joist name.

- The Champion International Corp. mills at Quinnesec, MI, and Sartell, MN, were acquired by and their names were changed to International Paper Co. in June of 2000.

- Weyerhaeuser Co. sold its custom architectural door division, based in Marshfield, WI, to Wind Point Partners in December of 2000. The mill was renamed Marshfield DoorSystems.

CENTRAL STATES

PRODUCTION

- Pulpwood production in the Central States (Illinois, Indiana, Iowa, and Missouri) increased by almost 12 percent—from 466 thousand cords in 1999 to 520 thousand cords in 2000.

- The Central States' pulpwood production from roundwood increased by 20 percent, and residues from primary wood-using mills in the Central States used for the production of pulpwood increased by 6 percent.

- Roundwood made up 46 percent of the total wood material used for pulpwood production in the Central States in 2000 (table 11).

- Pulpwood production from soft hardwood[6] roundwood rose from 46 thousand cords in 1999 to 64 thousand cords in 2000, and hard hardwood[7] production increased from 142 thousand cords to 166 thousand cords (table 12 and fig. 17).

- Over 68 percent of the wood material produced in the Central States for pulpwood in 2000 was exported to other regions of the country. Pulpwood roundwood exports totaled 167 thousand cords, and the export of residues for pulpwood from other wood-using mills totaled 188 thousand cords.

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[6] *Hardwood species with an average specific gravity of 0.50 or less.*

[7] *Hardwood species with an average specific gravity greater than 0.50.*

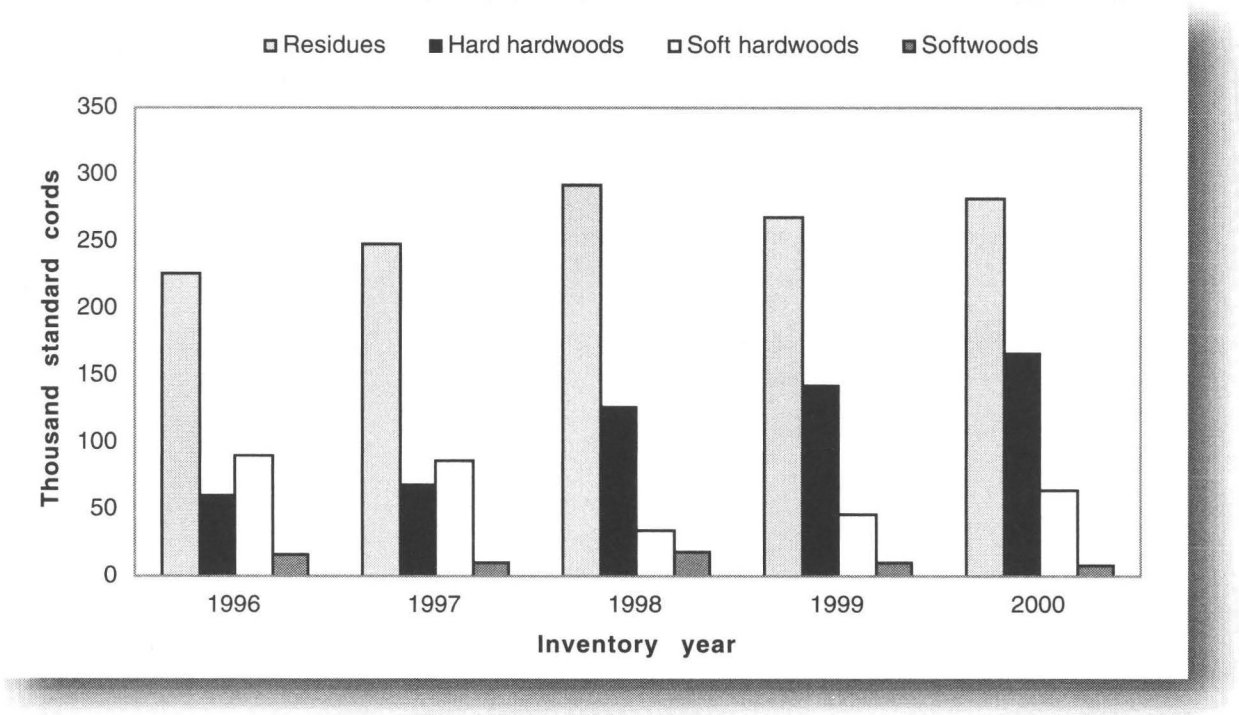

Figure 17.—*Pulpwood production in the Central States, 1996-2000.*

- Loggers harvested pulpwood in 22 counties in Illinois, 15 counties in Indiana, 8 counties in Iowa, and 13 counties in Missouri (fig. 18).

- Pulpwood production from whole-tree chips increased by 19 percent from 1999 to 2000. The 59 thousand cords of whole-tree chips made up one-quarter of the total pulpwood roundwood produced in the Central States in 2000.

Illinois

- Illinois produced 92 thousand cords of pulpwood in 2000, an increase of 16 percent from the previous year (table 13). Illinois contributed 18 percent of the total pulpwood production in the Central States in 2000 (fig. 19).

- Illinois does not have any primary wood pulp or particleboard mills; consequently, all pulpwood harvested is shipped to plants outside the State.

Indiana

- Pulpwood production in Indiana accounted for 32 percent of the total pulpwood produced in the Central States region. The 168 thousand cords of wood material produced in Indiana in 2000 is a 4-percent decrease from the 1999 level of 176 thousand cords.

- From 1999 to 2000, roundwood production decreased by 9 percent and residue production decreased by 2 percent.

Iowa

- Iowa's total pulpwood production in 2000 was 48 thousand cords, an increase of 40 percent from 1999. The State contributed 9 percent of the region's total pulpwood produced.

- Residues accounted for almost two-thirds of Iowa's pulpwood production in 2000.

Missouri

- Missouri was the largest producer of pulpwood in the Central States in 2000, with 41 percent of the region's total, or 212 thousand cords. The production of pulpwood in Missouri increased by 20 percent from 1999 to 2000.

- Missouri exported 92 percent (195 thousand cords) of the State's pulpwood production to mills in the Southern States.

RECEIPTS

- Pulp mills in the Central States received 177 thousand cords in 2000, up 23 percent from 1999.

- Roundwood receipts increased by 36 percent—from 52 thousand cords in 1999 to 71 thousand cords in 2000—and residue receipts increased by 15 percent—from 92 thousand cords in 1999 to 106 thousand cords in 2000.

- Softwood roundwood was not used for pulpwood by the Central States pulp mills.

INDUSTRY TRENDS AND ANALYSIS

- Average daily woodpulp production decreased from 568 tons in 1999 to 498 tons in 2000 (table 14).

- In 2000, only 30 percent of the roundwood and 33 percent of the residues produced for pulpwood in the Central States went to pulp mills located in the Central States.

- Hardwood residue from sawmills and other wood-using mills accounted for 49 percent of all the wood material used by the Central States pulp mills. It continues to be the dominant form of wood material procured.

- Huebert Fiberboard Co, Boonville, MO, was bought and its name was changed to Huebert Brothers Products in 2000.

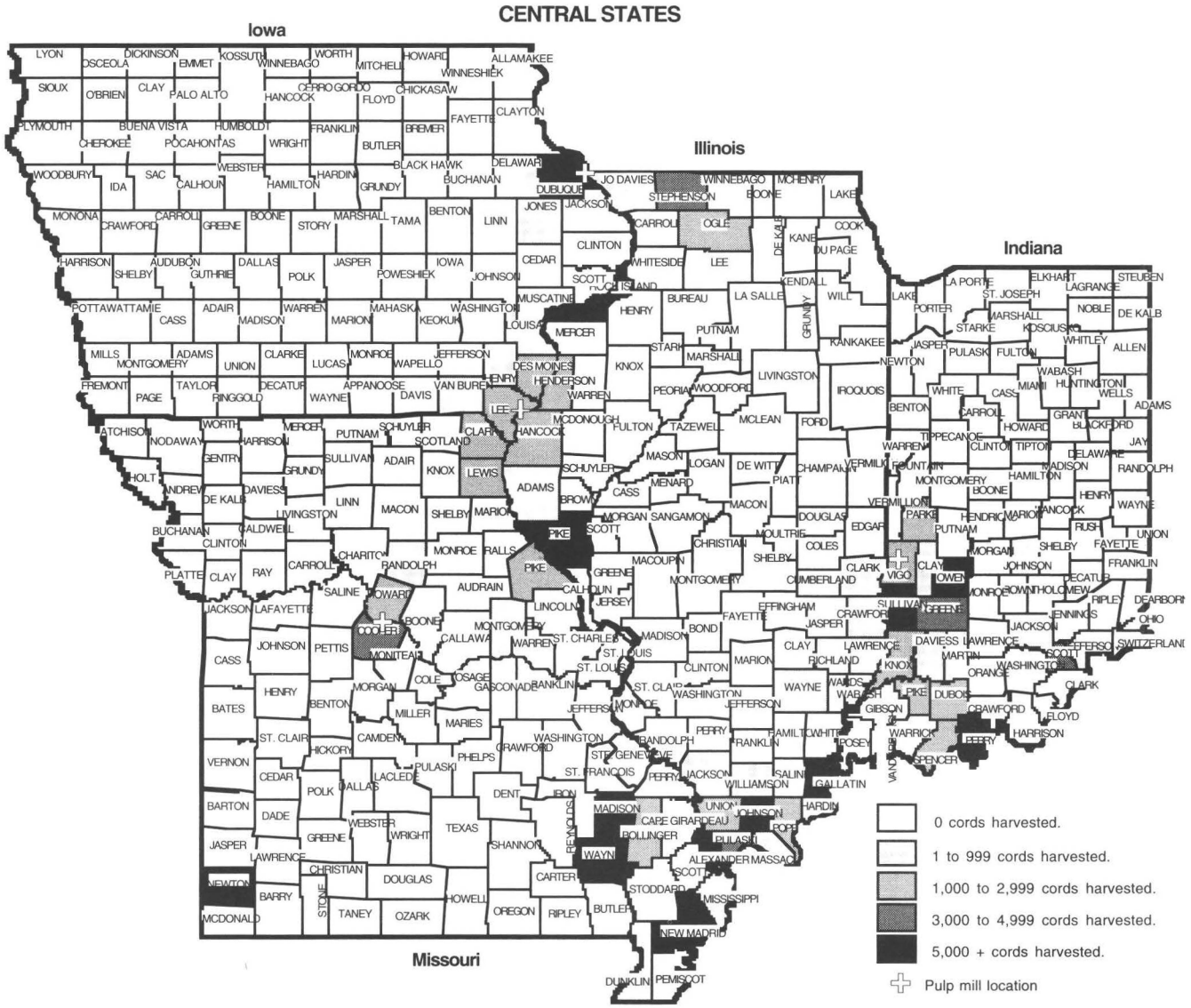

Figure 18.—*Production of pulpwood from roundwood (including chips from roundwood) in the Central States by county, in standard cords, 2000. Locations of Central States mills are shown.*

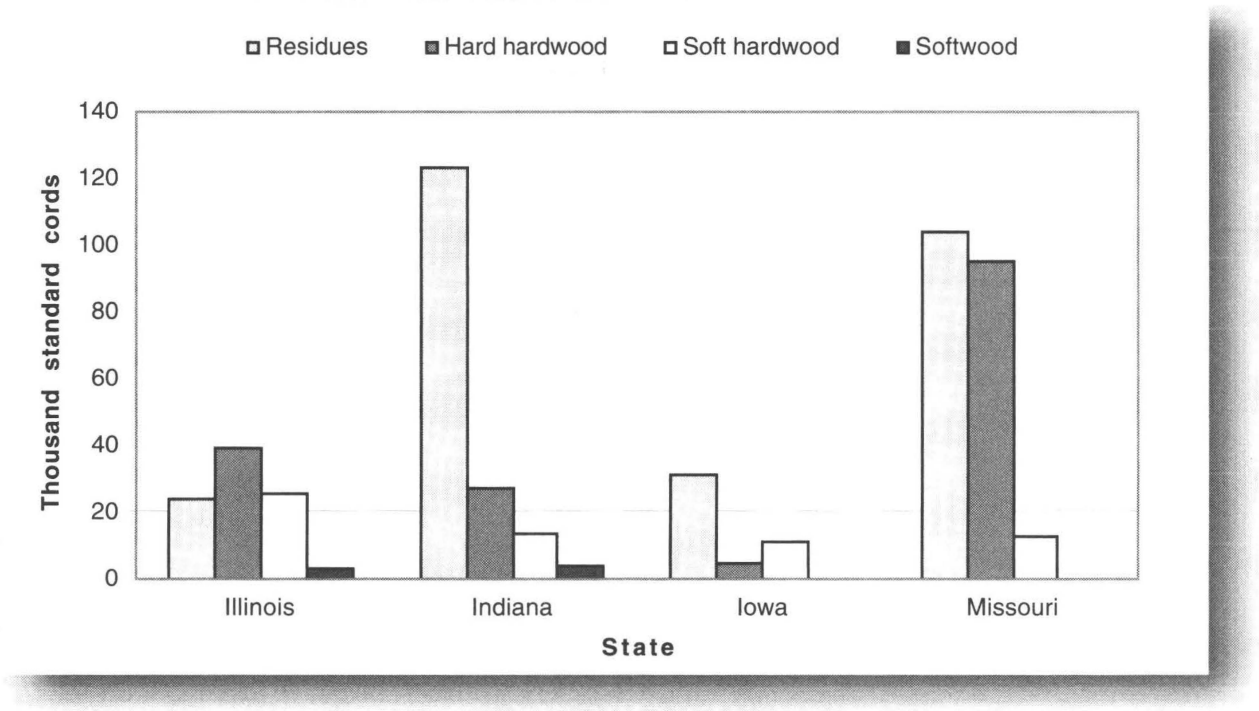

Figure 19.—*Central States pulpwood production by species group and residues, 2000.*

PLAINS STATES

PRODUCTION

- Pulpwood production in the Plains States was 122 thousand cords in 2000, a decrease of 17 percent from 1999 (fig. 20). Pulpwood came from Kansas, North Dakota, and South Dakota.
- Softwood residues accounted for 89 percent of the pulpwood production for the Plains States in 2000 (fig. 21), most of which came from South Dakota.
- Sixty thousand cords of softwood residue from the Plains States were exported to Wisconsin in 2000.
- Exports of aspen and balsam poplar from North Dakota to Minnesota mills was nearly halved, decreasing from 1,209 cords in 1999 to only 609 cords in 2000.
- The only mill in the Plains States in 2000 was Merillat Industries, Inc. (particleboard), in Rapid City, SD, which has an annual production capacity of 95 million square feet 3/4-inch basis.

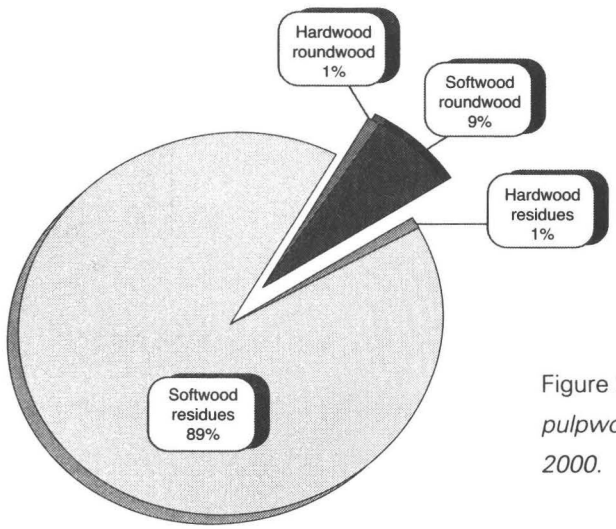

Figure 21.—*Plains States pulpwood production, 2000.*

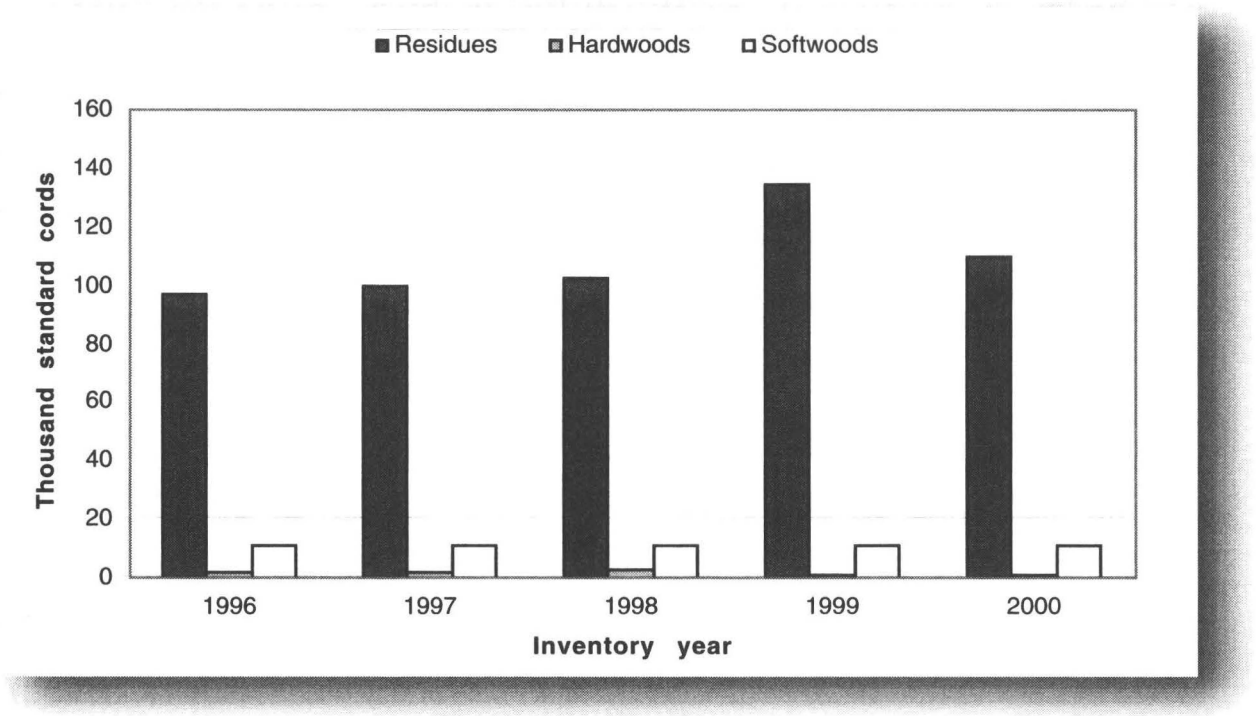

Figure 20.—*Pulpwood production in the Plains States, 1996-2000.*

APPENDIX

Conversion Factors Used In The North-Central Region

Standard cords of green roundwood per green ton:

Species	Factor	Species	Factor
Softwoods	0.4688	Hardwoods (continued)	
Northern white-cedar	.6329	White birch	0.4018
Balsam fir	.4688	Yellow birch	.3723
Hemlock	.4150	River birch	.3871
Jack pine	.4688	Sweetgum	.3669
Red pine	.4688	Yellow-poplar	.4219
White pine	.4777	Blackgum	.3779
Shortleaf pine	.3956	Sycamore	.4083
Spruce	.5014	Cottonwood	.4291
Tamarack	.4291	Elm	.4018
Hardwoods	.3939	Hickory	.3701
Soft hardwoods	.4171	Hard maple	.3617
Hard hardwoods	.3708	Soft maple	.4083
Ash	.4330	Black cherry	.4688
Aspen	.4291	Red oak	.3444
Balsam poplar	.4083	White oak	.3723
Basswood	.5167	Black oak	.3444
Beech	.3956	Other hardwoods	.4777

TABLE TITLES

Table 1.—*Production and imports of pulpwood, Lake States, 2000*

Table 2.—*Lake States pulpwood production by State of origin, year, and destination, 1996-2000*

Table 3.—*Lake States pulpwood production by State of origin, product form, Forest Survey Unit, and destination, 2000*

Table 4.—*Lake States pulpwood production from roundwood by State, Forest Survey Unit, and species group, 1996-2000*

Table 5.—*Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Michigan, 2000*

Table 6.—*Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Minnesota, 2000*

Table 7.—*Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 2000*

Table 8.—*Number of industrial pulp or particleboard plants in the Lake States by product form, species group used, and State, 2000*

Table 9.—*Average daily production of active wood pulp mills in the Lake States by State, company, location, and type of pulp produced, 2000*

Table 10.—*Annual production of active particleboard and panel mills in the Lake States by State, company, location, and product produced, 2000*

Table 11.—*Production and imports of pulpwood, Central States, 2000*

Table 12.—*Central States pulpwood production by product form and species group, 1996-2000*

Table 13.—*Central States pulpwood production by State and destination, 1996-2000*

Table 14.—*Average daily production of active wood pulp mills in the Central States by company, location, and type of pulp produced, 2000*

Table 1.--Production and imports of pulpwood, Lake States, 2000

(In standard cords, unpeeled)

Product form, species group, and destination	Production by State [1]			Regional Total	Imports				Total imports	Total receipts
	Michigan	Minnesota	Wisconsin		Central States	Plains States	Other U.S. [2]	Canada		
Softwood roundwood										
Northern white-cedar										
Michigan	4,551	–	402	4,953	–	–	–	12	12	4,965
Total	4,551	–	402	4,953	–	–	–	12	12	4,965
Balsam fir										
Canada	6,007	–	–	6,007	–	–	–	–	–	–
Michigan	40,269	–	3,562	43,832	–	–	–	106	106	43,938
Minnesota	3,304	183,770	22,854	209,928	–	–	–	–	–	209,928
Wisconsin	14,134	618	60,386	75,137	–	–	–	426	426	75,563
Total	63,714	184,388	86,802	334,904	–	–	–	532	532	329,429
Hemlock										
Michigan	76,478	–	9,073	85,551	–	–	–	108	108	85,659
Wisconsin	2,431	–	12,910	15,341	–	–	–	–	–	15,341
Total	78,909	–	21,983	100,892	–	–	–	108	108	101,000
Jack pine										
Michigan	186,866	–	5,134	192,000	–	–	–	252	252	192,252
Minnesota	12	56,131	2,656	58,799	–	11	–	10,870	10,881	69,680
Wisconsin	8,771	22,997	287,734	319,502	306	–	–	–	306	319,809
Total	195,648	79,129	295,524	570,301	306	11	–	11,122	11,439	581,740
Red pine										
Michigan	77,960	–	2,837	80,797	–	–	–	194	194	80,990
Minnesota	–	29,699	1,322	31,021	–	–	–	23	23	31,045
Wisconsin	5,523	5,657	301,420	312,599	1,635	–	–	–	1,635	314,234
Total	83,483	35,356	305,578	424,417	1,635	–	–	217	1,852	426,269
White pine										
Michigan	2,434	–	184	2,618	–	–	–	5	5	2,624
Minnesota	–	887	142	1,028	–	–	–	–	–	1,028
Wisconsin	1,721	253	53,733	55,707	1,592	–	–	–	1,592	57,299
Total	4,155	1,139	54,059	59,353	1,592	–	–	5	1,597	60,951
Spruce										
Canada	9,995	–	–	9,995	–	–	–	–	–	–
Michigan	19,989	–	1,857	21,846	–	–	–	53	53	21,898
Minnesota	790	141,037	7,882	149,708	–	–	–	2,523	2,523	152,231
Wisconsin	20,461	41,441	56,661	118,563	–	–	–	17,961	17,961	136,524
Total	51,235	182,478	66,399	300,112	–	–	–	20,537	20,537	310,654

Tamarack										
Michigan	5,506	–	575	6,081	–	–	–	17	17	6,098
Minnesota	–	3,077	75	3,152	–	–	–	–	–	3,152
Wisconsin	630	14,695	13,854	29,179	–	–	–	–	–	29,179
Total	6,136	17,772	14,504	38,412	–	–	–	17	17	38,430
Total softwood roundwood										
Canada	16,002	–	–	16,002	–	–	–	–	–	–
Michigan	414,054	–	23,625	437,678	–	–	–	746	746	438,424
Minnesota	4,106	414,601	34,930	453,637	–	11	–	13,417	13,427	467,065
Wisconsin	53,671	85,661	786,696	926,028	3,533	–	–	18,387	21,920	947,948
Total	487,832	500,263	845,251	1,833,346	3,533	11	–	32,550	36,094	1,853,438
Softwood residues										
Canada	10,968	11,074	106	22,149	–	–	–	–	–	–
Michigan	84,931	–	11,057	95,988	–	–	–	–	–	95,988
Minnesota	–	29,943	1,369	31,312	–	–	–	–	–	31,312
Other	–	5,957	1,986	7,942	–	–	–	–	–	–
Wisconsin	106,263	1,100	79,187	186,550	–	60,000	28,970	16,290	105,260	291,810
Total	202,162	48,075	93,705	343,942	–	60,000	28,970	16,290	105,260	419,111
Total softwood material										
Canada	26,970	11,074	106	38,151	–	–	–	–	–	–
Michigan	498,984	–	34,682	533,666	–	–	–	746	746	534,413
Minnesota	4,106	444,545	36,299	484,949	–	11	–	13,417	13,427	498,377
Other	–	5,957	1,986	7,942	–	–	–	–	–	–
Wisconsin	159,934	86,761	865,883	1,112,579	3,533	60,000	28,970	34,677	127,180	1,239,759
Total	689,994	548,337	938,956	2,177,288	3,533	60,011	28,970	48,840	141,354	2,272,548

(Table 1 continued on next page)

(Table 1 continued)

Product form, species group, and destination	Production by State [1]			Regional Total	Imports				Total imports	Total receipts
	Michigan	Minnesota	Wisconsin		Central States	Plains States	Other U.S. [2]	Canada		
Hardwood roundwood										
Ash										
Michigan	40,977	–	2,272	43,249	–	–	–	5	5	43,254
Minnesota	–	346	–	346	–	–	–	–	–	346
Wisconsin	2,565	955	62,390	65,911	–	–	–	167	167	66,078
Total	43,542	1,301	64,662	109,505	–	–	–	172	172	109,677
Aspen										
Michigan	786,210	–	47,468	833,678	2,469	–	–	38,972	41,441	875,119
Minnesota	1,690	2,078,179	91,850	2,171,719	–	603	–	166,096	166,699	2,338,418
Wisconsin	50,181	55,595	872,611	978,388	–	–	–	16,678	16,678	995,065
Total	838,081	2,133,774	1,011,930	3,983,785	2,469	603	–	221,746	224,818	4,208,603
Balsam poplar										
Michigan	29,681	–	1,946	31,627	130	–	–	7	137	31,764
Minnesota	–	92,191	1,024	93,214	–	6	–	6,651	6,657	99,871
Wisconsin	44	603	2,747	3,394	–	–	–	1,634	1,634	5,028
Total	29,725	92,794	5,716	128,235	130	6	–	8,292	8,428	136,663
Basswood										
Michigan	60,832	–	9,292	70,124	23	–	–	1	24	70,148
Minnesota	388	9,807	4,554	14,749	–	–	–	–	–	14,749
Wisconsin	1,772	230	49,762	51,764	–	–	–	–	–	51,764
Total	62,992	10,037	63,608	136,637	23	–	–	1	24	136,661
Beech										
Michigan	36,980	–	4,392	41,372	–	–	–	1	1	41,373
Wisconsin	1	–	1,182	1,183	–	–	–	–	–	1,183
Total	36,981	–	5,574	42,555	–	–	–	1	1	42,556
White birch										
Michigan	141,636	–	10,202	151,838	–	–	–	23	23	151,861
Minnesota	–	101,841	4,713	106,554	–	–	–	351	351	106,905
Wisconsin	10,488	52,141	218,813	281,441	–	–	–	17,993	17,993	299,434
Total	152,124	153,981	233,728	539,833	–	–	–	18,366	18,366	558,199
Yellow birch										
Michigan	45,994	–	4,639	50,633	–	–	–	9	9	50,642
Wisconsin	591	–	18,843	19,434	–	–	–	–	–	19,434
Total	46,585	–	23,481	70,066	–	–	–	9	9	70,075
Cottonwood										
Minnesota	–	–	–	–	–	–	–	104	104	104
Wisconsin	20	–	1,825	1,845	–	–	–	–	–	1,845
Total	20	–	1,825	1,845	–	–	–	104	104	1,949

Elm										
Michigan	2,466	–	18	2,485	–	–	–	–	–	2,485
Wisconsin	590	–	47,824	48,414	–	–	–	–	–	48,414
Total	3,057	–	47,842	50,899	–	–	–	–	–	50,899
Hickory										
Michigan	2,565	–	–	2,565	–	–	–	–	–	2,565
Total	2,565	–	–	2,565	–	–	–	–	–	2,565
Hard maple										
Michigan	364,504	–	31,931	396,435	–	–	–	54	54	396,489
Minnesota	–	4,668	2,578	7,246	–	–	–	–	–	7,246
Wisconsin	13,247	5,988	237,341	256,577	–	–	–	668	668	257,245
Total	377,752	10,656	271,850	660,258	–	–	–	722	722	660,980
Soft maple										
Michigan	433,221	–	32,733	465,955	–	–	–	41	41	465,996
Minnesota	807	33,621	5,287	39,715	–	–	–	–	–	39,715
Wisconsin	8,343	681	198,843	207,867	–	–	–	668	668	208,535
Total	442,372	34,302	236,863	713,537	–	–	–	709	709	714,246
Red oak										
Michigan	54,043	–	2,260	56,303	–	–	–	–	–	56,303
Wisconsin	2,813	96	117,730	120,639	–	–	–	835	835	121,474
Total	56,856	96	119,990	176,943	–	–	–	835	835	177,778
White oak										
Michigan	28,348	–	–	28,348	–	–	–	–	–	28,348
Wisconsin	1,521	94	39,433	41,048	–	–	–	835	835	41,883
Total	29,869	94	39,433	69,397	–	–	–	835	835	70,232
Other hardwoods										
Michigan	23,098	–	2,233	25,331	–	–	–	3	3	25,334
Wisconsin	20	–	491	510	–	–	–	–	–	510
Total	23,117	–	2,724	25,841	–	–	–	3	3	25,844

(Table 1 continued on next page)

(Table 1 continued)

Product form, species group, and destination	Production by State [1]			Regional Total	Imports				Total imports	Total receipts
	Michigan	Minnesota	Wisconsin		Central States	Plains States	Other U.S. [2]	Canada		
Total hardwood roundwood										
Michigan	2,050,556	–	149,387	2,199,943	2,622	–	–	39,116	41,738	2,241,681
Minnesota	2,885	2,320,652	110,006	2,433,543	–	609	–	173,203	173,812	2,607,354
Wisconsin	92,197	116,383	1,869,835	2,078,415	–	–	–	39,477	39,477	2,117,892
Total	2,145,638	2,437,035	2,129,228	6,711,901	2,622	609	–	251,796	255,027	6,966,928
Hardwood residues										
Canada	–	4,416	–	4,416	–	–	–	–	–	–
Michigan	241,532	–	11,108	252,640	14,081	–	–	–	14,081	266,721
Minnesota	–	38,247	4,436	42,683	–	–	–	32,178	32,178	74,861
Other [3]	–	–	3,676	3,676	–	–	–	–	–	–
Wisconsin	19,983	8,128	332,551	360,662	842	–	–	–	842	361,504
Total	261,515	50,791	351,771	664,076	14,923	–	–	32,178	47,101	703,085
Total hardwood material										
Canada	–	4,416	–	4,416	–	–	–	–	–	–
Michigan	2,292,087	–	160,496	2,452,583	16,703	–	–	39,116	55,819	2,508,402
Minnesota	2,885	2,358,898	114,442	2,476,225	–	609	–	205,381	205,990	2,682,215
Other [3]	–	–	3,676	3,676	–	–	–	–	–	–
Wisconsin	112,180	124,511	2,202,386	2,439,077	842	–	–	39,477	40,319	2,479,396
Total	2,407,153	2,487,826	2,480,999	7,375,977	17,545	609	–	283,974	302,128	7,670,013
Total all roundwood										
Canada	16,002	–	–	16,002	–	–	–	–	–	–
Michigan	2,464,609	–	173,012	2,637,621	2,622	–	–	39,863	42,485	2,680,105
Minnesota	6,991	2,735,253	144,936	2,887,180	–	620	–	186,619	187,239	3,074,419
Wisconsin	145,868	202,045	2,656,531	3,004,444	3,533	–	–	57,864	61,397	3,065,841
Total	2,633,470	2,937,298	2,974,479	8,545,247	6,155	620	–	284,346	291,121	8,820,366
Total all residues										
Canada	10,968	15,491	106	26,565	–	–	–	–	–	–
Michigan	326,462	–	22,166	348,628	14,081	–	–	–	14,081	362,709
Minnesota	–	68,190	5,805	73,995	–	–	–	32,178	32,178	106,173
Other [3]	–	5,957	5,662	11,618	–	–	–	–	–	–
Wisconsin	126,247	9,228	411,738	547,212	842	60,000	28,970	16,290	106,102	653,314
Total	463,677	98,865	445,476	1,008,018	14,923	60,000	28,970	48,468	152,361	1,122,196
Total all wood material										
Canada	26,970	15,491	106	42,567	–	–	–	–	–	–
Michigan	2,791,072	–	195,178	2,986,249	16,703	–	–	39,863	56,565	3,042,815
Minnesota	6,991	2,803,443	150,741	2,961,175	–	620	–	218,798	219,418	3,180,592
Other [3]	–	5,957	5,662	11,618	–	–	–	–	–	–
Wisconsin	272,114	211,272	3,068,269	3,551,655	4,375	60,000	28,970	74,154	167,499	3,719,154
Total	3,097,147	3,036,163	3,419,955	9,553,265	21,078	60,620	28,970	332,814	443,482	9,942,561

[1] *Vertical columns of figures under the box heading "Production by State" present the amount of roundwood cut or residue generated in each State.*

[2] *Mostly Western States.*

[3] *Pulpwood shipped to mills outside of region.*

Table may not add due to rounding.

Table 2.--Lake States pulpwood production by State of origin, year, and destination, 1996-2000

(In thousand standard cords, unpeeled) [1]

MICHIGAN

Year	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [2]
1996	3,111	2,815	5	267	25
1997	3,346	3,104	1	223	18
1998	3,076	2,773	1	272	30
1999	3,115	2,753	5	306	50
2000	3,097	2,791	7	272	27
5-year average	3,149	2,847	4	268	30

MINNESOTA

Year	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [2]
1996	3,065	–	2,676	352	38
1997	2,980	–	2,654	287	39
1998	2,975	–	2,685	251	39
1999	3,104	–	2,851	216	39
2000	3,036	–	2,803	211	21
5-year average	3,032	–	2,734	263	35

WISCONSIN

Year	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [2]
1996	3,309	218	68	3,020	3
1997	3,194	234	45	2,913	2
1998	3,160	204	50	2,905	2
1999	3,336	206	63	3,064	2
2000	3,420	195	151	3,068	6
5-year average	3,284	211	75	2,994	3

[1] *Includes mill residues used for pulp.*

[2] *Includes Canada.*

Table may not add due to rounding.

Table 3.--Lake States pulpwood production by State of origin, product form, Forest Survey Unit, and destination, 2000

(In thousand standard cords, unpeeled)

MICHIGAN

Product form and Forest Survey Unit	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [1]
Roundwood					
Eastern Upper Peninsula	575	542	–	22	11
Western Upper Peninsula	1,141	1,010	7	123	1
Northern Lower Peninsula	841	837	–	*	4
Southern Lower Peninsula	76	75	–	1	–
Total	2,633	2,465	7	146	16
Residues	464	326	–	126	11
Total pulpwood	3,097	2,791	7	272	27

MINNESOTA

Product form and Forest Survey Unit	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [1]
Roundwood					
Aspen-Birch	1,210	–	1,097	113	–
Northern Pine	1,428	–	1,399	29	–
Central Hardwood	228	–	169	59	–
Prairie	71	–	71	–	–
Total	2,937	–	2,735	202	–
Residues	99	–	68	9	21
Total pulpwood	3,036	–	2,803	211	21

WISCONSIN

Product form and Forest Survey Unit	Total production	Destination of pulpwood			
		Michigan	Minnesota	Wisconsin	Other [1]
Roundwood					
Northeastern	1,002	165	42	795	–
Northwestern	1,211	8	102	1,101	–
Central	650	*	*	649	–
Southwestern	87	–	*	87	–
Southeastern	25	*	–	25	–
Total	2,974	173	145	2,657	–
Residues	445	22	6	412	6
Total pulpwood	3,420	195	151	3,068	6

* *Less than 500 standard cords, unpeeled.*

[1] *Includes Canada.*

Table may not add due to rounding.

Table 4.--Lake States pulpwood production from roundwood by State, Forest Survey Unit, and species group, 1996-2000

(In thousand standard cords, unpeeled)

Forest Survey Unit	All species					Pine					Spruce				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
MICHIGAN															
Eastern Upper Peninsula	689	633	590	627	575	126	131	106	110	110	27	18	25	24	19
Western Upper Peninsula	1,217	1,193	1,131	1,120	1,141	106	97	75	72	66	50	27	31	23	30
Northern Lower Peninsula	861	1,178	852	797	841	141	163	120	108	106	1	1	1	2	3
Southern Lower Peninsula	67	95	89	87	76	*	2	1	1	1	*	–	*	*	*
Total	2,834	3,099	2,662	2,632	2,633	373	392	302	291	283	78	46	57	50	51
MINNESOTA															
Aspen-Birch	1,321	1,046	1,119	1,171	1,210	38	35	33	27	44	158	123	110	102	125
Northern Pine	1,232	1,501	1,357	1,449	1,428	51	66	43	45	62	44	43	41	45	56
Central Hardwood	296	277	253	237	228	29	26	20	12	10	3	3	4	1	1
Prairie	48	52	72	94	71	–	–	*	*	*	*	–	*	*	*
Total	2,897	2,875	2,800	2,951	2,937	119	126	97	84	116	204	168	156	149	182
WISCONSIN															
Northeastern	1,003	980	874	899	1,002	158	173	149	117	146	16	18	18	21	31
Northwestern	1,210	1,134	1,119	1,209	1,211	231	205	151	164	190	18	22	16	21	28
Central	618	577	652	695	650	264	270	278	290	262	1	2	3	5	4
Southwestern	75	80	87	79	87	39	39	51	51	44	1	1	2	2	2
Southeastern	40	40	33	18	25	20	23	19	13	13	1	1	2	1	2
Total	2,945	2,811	2,765	2,900	2,974	712	709	649	635	655	34	44	40	50	66
Total Lake States	8,676	8,785	8,227	8,483	8,545	1,204	1,227	1,048	1,010	1,054	316	258	253	249	300

(Table 4 continued on next page)

(Table 4 continued)

Forest Survey Unit	Balsam fir					Other softwoods					Aspen				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
MICHIGAN															
Eastern Upper Peninsula	25	20	28	31	23	32	24	22	25	24	152	125	148	165	144
Western Upper Peninsula	38	29	41	37	36	53	57	55	57	65	334	339	309	287	308
Northern Lower Peninsula	2	2	3	5	6	*	*	*	1	*	406	540	375	354	367
Southern Lower Peninsula	*	–	–	*	–	*	–	*	*	*	22	38	25	26	19
Total	65	52	72	73	64	85	82	77	82	90	913	1,041	857	832	838
MINNESOTA															
Aspen-Birch	171	106	101	108	110	11	12	9	10	12	816	649	736	804	780
Northern Pine	75	79	80	85	72	2	8	6	3	6	988	1,187	1,057	1,142	1,091
Central Hardwood	6	10	6	1	2	–	1	1	*	*	247	222	206	204	194
Prairie	*	–	*	*	–	–	–	*	*	*	47	50	68	92	69
Total	252	195	188	194	184	13	21	16	12	18	2,098	2,108	2,067	2,241	2,134
WISCONSIN															
Northeastern	41	32	36	40	40	26	24	22	24	25	367	328	313	300	343
Northwestern	50	44	42	50	42	7	8	10	13	10	539	481	469	529	507
Central	1	1	1	1	1	2	3	2	2	2	170	149	171	203	147
Southwestern	*	*	*	*	4	*	*	*	*	*	24	17	18	14	12
Southeastern	*	*	*	*	–	*	*	*	*	*	11	5	4	1	3
Total	92	78	79	92	87	36	34	34	39	37	1,109	980	975	1,047	1,012
Total Lake States	409	325	339	359	335	134	137	127	133	144	4,120	4,129	3,899	4,120	3,984

(Table 4 continued on next page)

(Table 4 continued)

Forest Survey Unit	Birch					Maple					Other hardwoods				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
MICHIGAN															
Eastern Upper Peninsula	77	51	37	27	47	203	221	183	209	170	48	42	41	36	40
Western Upper Peninsula	144	87	71	63	110	370	430	414	460	415	122	126	136	121	112
Northern Lower Peninsula	35	40	33	30	42	188	266	172	170	209	88	165	148	127	109
Southern Lower Peninsula	*	1	*	1	1	16	23	23	28	26	28	32	38	31	28
Total	256	180	141	122	199	777	940	792	867	820	287	365	362	315	289
MINNESOTA															
Aspen-Birch	58	60	60	61	72	5	9	11	8	19	65	51	58	52	48
Northern Pine	45	55	69	74	73	1	1	1	1	16	26	63	59	53	51
Central Hardwood	7	8	6	8	9	4	5	7	6	10	1	3	3	4	3
Prairie	*	*	*	*	*	–	–	–	1	*	*	2	4	2	2
Total	109	123	135	144	154	9	15	19	15	45	92	119	123	111	104
WISCONSIN															
Northeastern	120	106	85	89	89	152	178	158	188	212	124	122	93	120	117
Northwestern	123	119	131	128	133	158	165	195	194	207	83	89	105	110	94
Central	27	24	28	27	30	64	51	65	64	75	90	77	105	102	128
Southwestern	3	5	3	2	3	4	7	5	3	11	5	11	7	6	11
Southeastern	1	2	1	1	1	2	4	2	1	4	3	4	4	2	3
Total	275	257	248	247	257	379	405	426	451	509	306	304	314	339	351
Total Lake States	640	560	524	513	610	1,165	1,360	1,237	1,334	1,374	685	788	799	765	744

* *Less than 500 standard cords.*

Table may not add due to rounding.

Table 5.--Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Michigan, 2000

(In standard cords, unpeeled)

Forest Survey Unit and county [1]	All species	Species group										
		Northern white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar
Eastern Upper Peninsula												
Alger	74,846	193	2,041	3,681	5,482	3,616	319	1,429	277	1,201	6,027	404
Chippewa	76,119	289	3,804	771	6,686	4,758	54	5,470	121	615	25,728	564
Delta	110,136	524	7,204	5,112	13,581	11,344	240	3,251	819	1,044	28,552	1,428
Luce	79,604	113	1,078	4,879	13,208	11,814	85	856	230	848	13,353	343
Mackinac	78,907	255	3,422	1,712	7,655	4,225	86	3,271	270	789	23,653	676
Menominee	71,628	143	2,331	1,303	1,520	1,072	114	2,360	452	931	26,014	1,094
Schoolcraft	83,989	277	2,689	2,045	12,373	11,393	127	1,938	397	834	20,745	644
Total	575,229	1,794	22,569	19,502	60,505	48,223	1,026	18,576	2,566	6,260	144,073	5,152
Western Upper Peninsula												
Baraga	85,528	128	1,352	9,783	3,386	1,464	93	1,280	185	1,692	18,714	1,062
Dickinson	103,618	232	5,084	1,911	2,659	2,274	306	3,825	560	583	58,275	2,383
Gogebic	118,242	3	3,185	9,659	119	210	15	2,162	26	2,806	18,388	411
Houghton	147,405	247	4,488	3,685	3,632	2,009	143	4,096	354	4,140	32,917	1,589
Iron	188,445	553	8,377	4,745	14,259	7,713	837	6,277	792	2,551	47,324	2,884
Keweenaw	54,182	13	179	3,354	179	124	6	180	19	1,229	3,335	178
Marquette	277,477	1,080	10,610	22,388	16,359	7,476	507	8,945	1,549	3,753	67,703	4,817
Ontonagon	165,954	60	2,280	3,831	1,246	1,055	43	2,785	86	5,544	61,022	1,487
Total	1,140,852	2,316	35,556	59,357	41,839	22,325	1,950	29,550	3,570	22,297	307,677	14,812
Northern Lower Peninsula												
Alcona	35,647	–	–	–	2,055	644	12	–	–	375	21,448	586
Alpena	35,606	156	1,511	–	1,608	23	12	466	–	664	15,949	684
Antrim	17,505	–	–	–	2,176	271	21	–	–	374	6,090	36
Arenac	7,266	–	–	–	–	77	–	–	–	41	5,380	149
Bay	5,586	–	–	–	49	–	–	–	–	59	2,347	102
Benzie	13,549	8	62	–	3,111	219	23	15	–	775	2,523	111
Charlevoix	9,689	–	–	–	312	344	3	–	–	188	2,548	139
Cheboygan	67,372	63	931	–	3,547	659	19	664	–	951	35,247	697
Clare	32,960	1	5	–	1,154	194	8	1	–	835	17,129	303
Crawford	46,405	–	–	–	14,204	965	122	–	–	122	17,651	69
Emmet	34,901	40	415	–	5,501	128	51	214	–	100	15,058	6
Gladwin	18,366	–	–	–	325	68	–	–	–	139	11,380	195
Grand Traverse	19,622	28	224	–	7,327	513	61	54	–	136	6,355	36
Iosco	20,191	–	–	–	5,503	327	48	–	–	19	10,375	241
Isabella	13,306	–	–	–	412	259	–	–	–	197	5,903	278
Kalkaska	23,170	–	–	–	5,331	287	43	–	–	152	11,143	60
Lake	24,537	–	–	–	3,704	765	–	–	–	498	7,193	237
Leelanau	1,412	–	–	–	195	10	–	–	–	109	642	–

Manistee	18,291	–	–	–	192	221	–	–	–	1,571	5,609	238
Mason	18,634	–	–	–	235	150	–	–	–	827	5,999	296
Mecosta	11,646	–	–	–	1,280	384	–	–	–	143	5,408	87
Midland	18,566	–	–	–	55	11	–	–	–	204	9,399	298
Missaukee	31,758	1	11	–	1,300	241	–	3	–	278	14,162	359
Montmorency	43,587	–	234	–	2,297	235	13	350	–	821	18,858	546
Newaygo	18,344	–	–	–	–	–	–	–	–	310	5,532	236
Oceana	5,888	–	–	–	12	270	–	–	–	113	2,223	105
Ogemaw	46,838	–	12	–	11,096	308	106	–	–	1,733	8,531	452
Osceola	22,747	–	–	–	260	171	–	–	–	620	13,834	236
Oscoda	43,895	6	83	–	6,446	1,371	54	62	–	484	24,263	948
Otsego	37,351	–	67	–	3,549	1,026	31	100	–	437	10,122	77
Presque Isle	43,561	121	1,888	50	2,495	278	20	770	–	404	24,566	990
Roscommon	28,312	6	53	–	3,527	705	11	13	–	38	13,785	62
Wexford	24,565	12	95	–	3,486	1,418	–	23	–	746	10,737	162
Total	841,069	442	5,590	50	92,746	12,541	657	2,733	–	14,463	367,390	9,024
Southern Lower Peninsula												
Allegan	19,150	–	–	–	–	–	–	–	–	13	2,266	18
Barry	1,670	–	–	–	–	–	–	–	–	27	447	38
Berrien	1,110	–	–	–	–	213	522	376	–	–	–	–
Branch	46	–	–	–	–	–	–	–	–	–	5	–
Calhoun	1,075	–	–	–	–	–	–	–	–	–	121	–
Cass	1,997	–	–	–	–	–	–	–	–	–	224	–
Eaton	291	–	–	–	–	–	–	–	–	–	33	–
Gratiot	1,455	–	–	–	–	–	–	–	–	19	660	27
Huron	290	–	–	–	–	–	–	–	–	–	290	–
Kalamazoo	1,553	–	–	–	–	–	–	–	–	–	174	–
Kent	8,408	–	–	–	–	–	–	–	–	88	1,747	124
Lapeer	58	–	–	–	–	–	–	–	–	1	17	*
Livingston	210	–	–	–	–	–	–	–	–	4	67	7
Macomb	27	–	–	–	–	–	–	–	–	*	9	1
Montcalm	14,618	–	–	–	23	68	–	–	–	213	5,487	302
Muskegon	8,885	–	–	–	19	–	–	–	–	60	1,468	85
Oakland	13	–	–	–	–	–	–	–	–	*	4	*
Ottawa	5,070	–	–	–	–	–	–	–	–	52	992	74
Saginaw	741	–	–	–	20	–	–	–	–	–	493	–
Sanilac	3,551	–	–	–	269	46	–	–	–	–	2,490	–
Shiawassee	984	–	–	–	–	–	–	–	–	21	314	30
St. Joseph	711	–	–	–	–	–	–	–	–	–	79	–
Tuscola	1,543	–	–	–	228	67	–	–	–	–	1,028	–
Van Buren	1,760	–	–	–	–	–	–	–	–	–	197	–
Wayne	1,102	–	–	–	–	–	–	–	–	23	332	31
Total	76,320	–	–	–	559	394	522	376	–	522	18,941	737
State total	2,633,470	4,551	63,714	78,909	195,648	83,483	4,155	51,235	6,136	43,542	838,081	29,725

(Table 5 continued on next page)

(Table 5 continued)

Forest Survey Unit and county [1]	Species group											
	Basswood	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Other hardwoods
Eastern Upper Peninsula												
Alger	1,898	2,333	5,705	2,544	–	18	–	17,446	17,814	1,189	–	1,230
Chippewa	685	747	4,853	1,158	–	28	1	8,281	10,614	345	–	547
Delta	1,182	991	5,550	2,127	–	60	–	13,858	12,006	424	2	837
Luce	1,095	1,366	3,962	1,622	–	37	38	11,548	11,708	672	–	747
Mackinac	881	1,011	5,541	1,574	–	34	–	10,877	11,864	445	–	666
Menominee	2,934	1,189	4,605	1,658	–	88	–	11,536	10,941	618	6	719
Schoolcraft	832	1,075	4,017	1,711	–	37	3	11,204	10,421	503	–	725
Total	9,507	8,712	34,233	12,394	–	301	43	84,749	85,368	4,196	8	5,472
Western Upper Peninsula												
Baraga	1,874	1,698	5,567	2,668	–	27	–	17,303	15,419	868	4	962
Dickinson	2,837	961	3,237	1,079	–	26	–	8,162	7,975	628	104	519
Gogebic	4,895	2,794	11,371	3,045	15	233	–	27,765	25,518	3,373	884	1,365
Houghton	4,424	3,054	10,325	5,449	–	79	–	34,475	28,965	1,625	85	1,622
Iron	4,076	3,331	13,234	4,637	–	188	–	31,956	30,420	1,963	304	2,024
Keweenaw	1,895	2,231	4,710	2,319	–	*	–	15,804	16,179	1,165	–	1,080
Marquette	3,415	3,696	19,568	7,647	2	212	–	49,709	43,438	1,571	–	3,031
Ontonagon	4,954	2,245	8,762	6,079	3	115	–	35,562	26,078	1,375	132	1,209
Total	28,371	20,009	76,775	32,923	20	881	–	220,737	193,994	12,567	1,513	11,813
Northern Lower Peninsula												
Alcona	718	375	2,732	–	–	–	–	1,655	4,660	385	–	–
Alpena	567	679	4,042	–	–	–	–	2,280	6,964	–	–	–
Antrim	2,369	170	1,292	–	–	–	–	1,627	2,957	–	–	122
Arenac	21	43	265	1	–	2	3	163	1,120	–	–	–
Bay	73	33	122	20	–	22	40	512	1,129	359	719	–
Benzie	509	195	234	34	–	36	67	1,573	1,951	250	264	1,590
Charlevoix	792	193	428	29	–	31	58	2,055	2,436	44	89	–
Cheboygan	2,562	608	4,599	–	–	–	–	4,685	10,897	457	–	787
Clare	651	241	649	92	–	99	183	2,870	5,525	2,077	945	–
Crawford	414	146	1,506	17	–	19	35	1,451	6,245	3,202	70	168
Emmet	971	171	2,333	1	–	1	1	2,808	5,655	–	–	1,446
Gladwin	183	83	501	51	–	55	102	1,437	3,424	272	150	–
Grand Traverse	336	53	393	11	–	12	22	585	1,660	1,166	–	653
Iosco	6	19	701	–	–	–	*	62	1,451	1,438	–	–
Isabella	235	90	265	85	–	91	168	2,088	3,025	70	140	–
Kalkaska	374	61	293	15	–	16	29	1,332	3,284	247	292	213
Lake	397	152	236	72	–	78	143	2,028	3,296	2,665	3,073	–
Leelanau	65	25	29	–	–	–	–	223	114	–	–	–

Manistee	1,038	397	481	72	–	78	144	3,004	4,040	883	323	–
Mason	618	237	400	90	–	97	179	2,703	3,644	1,529	1,629	–
Mecosta	150	47	131	26	–	51	53	730	1,965	557	606	26
Midland	244	93	376	88	–	95	175	2,135	4,739	217	437	–
Missaukee	458	127	831	109	–	118	217	3,457	6,643	1,201	2,244	–
Montmorency	2,588	794	3,929	*	–	*	1	3,904	8,972	43	–	–
Newaygo	369	109	188	72	–	143	142	1,891	4,504	2,673	2,096	78
Oceana	118	43	78	32	–	40	63	806	1,280	298	399	6
Ogemaw	1,371	956	3,159	–	–	–	–	3,889	9,012	5,717	495	–
Osceola	519	180	650	72	–	78	142	2,226	3,603	51	104	–
Oscoda	959	378	1,890	–	–	–	–	1,834	4,964	154	–	–
Otsego	2,033	649	2,794	*	–	*	*	6,835	9,095	282	–	252
Presque Isle	1,392	419	3,764	–	–	–	–	1,160	4,376	868	–	–
Roscommon	134	53	825	5	–	6	10	483	5,590	1,766	1,240	–
Wexford	591	201	348	49	–	53	98	2,168	3,956	140	281	–
Total	23,828	8,020	40,466	1,044	–	1,220	2,077	66,657	142,173	29,011	15,596	5,342
Southern Lower Peninsula												
Allegan	265	6	12	6	–	200	11	133	5,917	4,838	5,235	231
Barry	38	12	25	12	–	17	23	282	521	107	116	5
Berrien	–	–	–	–	–	–	–	–	–	–	–	–
Branch	1	–	–	–	–	*	–	–	14	12	13	*
Calhoun	14	–	–	–	–	11	–	–	332	280	303	13
Cass	27	–	–	–	–	21	–	–	617	521	563	25
Eaton	4	–	–	–	–	3	–	–	90	76	82	4
Gratiot	25	9	18	8	–	10	16	200	331	57	73	2
Huron	–	–	–	–	–	–	–	–	–	–	–	–
Kalamazoo	21	–	–	–	–	16	–	–	480	405	437	20
Kent	158	40	82	38	–	82	75	917	2,501	1,150	1,357	49
Lapeer	2	1	8	–	–	–	*	7	21	–	–	–
Livingston	5	2	4	2	–	2	4	47	66	–	–	–
Macomb	1	*	*	*	–	*	*	6	8	–	–	–
Montcalm	350	98	221	92	–	119	182	2,365	3,761	584	730	23
Muskegon	140	27	55	26	–	81	51	626	2,444	1,652	2,090	63
Oakland	1	–	*	–	–	–	*	3	4	–	–	–
Ottawa	88	24	49	23	–	45	45	547	1,356	736	1,016	24
Saginaw	–	–	–	–	–	–	–	4	224	–	–	–
Sanilac	63	–	135	–	–	–	–	19	530	–	–	–
Shiawassee	25	9	20	9	–	10	18	220	308	–	–	–
St. Joseph	10	–	–	–	–	8	–	–	220	185	200	9
Tuscola	–	–	–	–	–	–	–	–	220	–	–	–
Van Buren	24	–	–	–	–	18	–	–	544	459	496	22
Wayne	27	10	21	10	–	10	19	233	326	20	40	–
Total	1,287	239	649	224	–	655	446	5,609	20,837	11,082	12,752	491
State total	62,992	36,981	152,124	46,585	20	3,057	2,565	377,752	442,372	56,856	29,869	23,117

* *Less than 1/2 cord.*

[1] *Includes only those counties that supplied pulpwood in 2000.*

Table may not add due to rounding.

Table 6.--Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Minnesota, 2000

(In standard cords, unpeeled)

Forest Survey Unit and county [1]	All species	Species group														
		Balsam fir	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Bass-wood	White birch	Hard maple	Soft maple	Red oak	White oak
Aspen-Birch																
Carlton	82,926	7,570	1,149	2,717	101	450	421	26	54,065	1,172	460	12,267	655	1,872	–	–
Cook	45,862	3,964	2,145	216	7	8,452	534	–	28,759	149	–	1,635	–	*	–	–
Koochiching	389,764	34,323	7,054	1,601	47	52,327	4,362	–	261,175	24,445	96	4,235	9	89	–	–
Lake	92,151	10,526	5,381	2,103	221	15,895	542	494	42,709	1,683	323	9,219	489	2,564	–	–
St. Louis	599,166	54,107	15,881	5,179	315	47,788	5,865	747	392,795	17,399	1,346	44,486	5,725	7,439	47	47
Total	1,209,869	110,490	31,612	11,816	690	124,912	11,724	1,266	779,504	44,848	2,226	71,843	6,878	11,965	47	47
Northern Pine																
Aitkin	140,859	3,709	748	1,943	90	3,154	1,562	–	114,435	1,602	960	6,726	26	5,905	–	–
Becker	68,014	909	1,611	268	5	578	2	–	60,916	1,193	92	2,401	–	39	–	–
Beltrami	149,434	4,141	4,768	690	–	2,333	1,275	–	115,057	13,860	1,164	6,046	–	100	–	–
Cass	218,766	5,047	7,078	5,160	14	2,481	146	–	172,369	3,838	1,790	17,205	18	3,620	–	–
Clearwater	68,580	2,350	1,098	43	3	271	91	–	59,235	1,942	1,011	2,471	–	65	–	–
Crow Wing	102,699	429	6,534	1,274	88	764	72	–	85,423	58	116	6,479	–	1,462	–	–
Hubbard	124,938	707	7,451	1,773	–	318	74	–	106,954	481	51	6,963	–	166	–	–
Itasca	405,972	50,467	5,484	4,173	27	38,336	2,272	–	261,126	14,422	550	24,582	356	4,177	–	–
Lake of the Woods	80,360	4,512	4,901	270	–	8,037	148	–	57,648	4,673	–	170	–	–	–	–
Mahnomen	13,867	–	39	–	–	25	1	–	13,255	321	122	103	–	–	–	–
Roseau	34,203	2	1,945	28	–	201	290	–	29,003	2,557	–	178	–	–	–	–
Wadena	20,445	115	3,411	586	–	–	2	–	15,922	265	–	141	–	2	–	–
Total	1,428,137	72,389	45,068	16,208	227	56,497	5,935	–	1,091,345	45,212	5,856	73,464	399	15,536	–	–
Central Hardwood																
Anoka	293	–	–	42	–	5	–	–	164	–	–	34	–	49	–	–
Benton	168	–	–	95	–	–	–	–	73	–	–	–	–	–	–	–
Chisago	437	–	46	274	38	18	–	–	61	–	–	–	–	–	–	–
Dakota	427	–	297	80	7	29	–	–	–	–	–	10	–	3	–	–
Douglas	877	–	–	–	–	–	–	–	877	–	–	–	–	–	–	–
Fillmore	213	–	–	111	52	49	–	–	–	–	–	–	–	–	–	–
Goodhue	293	–	–	75	–	11	–	2	172	–	4	9	3	17	–	–
Houston	427	–	11	361	11	–	–	–	44	–	–	–	–	–	–	–
Isanti	1,912	–	90	656	–	80	–	–	1,068	3	–	10	–	6	–	–
Kanabec	28,047	–	74	368	–	2	–	–	25,064	196	507	419	21	1,395	–	–
Mille Lacs	21,189	–	10	116	–	341	–	–	19,443	68	463	243	–	505	–	–
Morrison	16,428	–	182	273	3	72	–	–	14,560	10	277	178	–	873	–	–
Olmsted	72	–	–	72	–	–	–	–	–	–	–	–	–	–	–	–
Otter Tail	14,039	–	65	32	–	–	–	–	13,471	330	4	105	–	33	–	–
Pine	131,444	1,509	1,294	2,532	40	201	110	33	110,448	198	184	7,560	3,354	3,884	49	47
Ramsey	31	–	–	–	–	31	–	–	–	–	–	–	–	–	–	–
Rice	358	–	–	228	–	130	–	–	–	–	–	–	–	–	–	–
Scott	13	–	–	–	–	–	–	–	13	–	–	–	–	–	–	–
Sherburne	1,938	–	92	1,804	–	2	–	–	40	–	–	–	–	–	–	–
Todd	9,126	–	137	–	–	–	–	–	8,289	63	516	84	–	36	–	–
Wabasha	272	–	–	180	64	28	–	–	–	–	–	–	–	–	–	–
Washington	85	–	–	32	6	6	–	–	40	–	–	–	–	–	–	–
Total	228,090	1,509	2,298	7,332	222	1,006	110	35	193,827	868	1,955	8,653	3,378	6,801	49	47
Prairie																
Clay	304	–	–	–	–	–	–	–	300	–	–	4	–	–	–	–
Kittson	13,867	–	78	–	–	51	2	–	13,070	665	–	1	–	–	–	–
Marshall	21,551	–	44	–	–	13	1	–	20,496	990	–	6	–	–	–	–
Norman	4,578	–	7	–	–	–	–	–	4,520	51	–	–	–	–	–	–
Pennington	11,533	–	–	–	–	–	–	–	11,481	51	–	–	–	–	–	–
Polk	12,666	–	–	–	–	–	–	–	12,666	–	–	–	–	–	–	–
Red Lake	6,704	–	22	–	–	–	–	–	6,564	108	–	10	–	–	–	–
Total	71,203	–	152	–	–	64	4	–	69,098	1,865	–	21	–	–	–	–
State total	2,937,298	184,388	79,129	35,356	1,139	182,478	17,772	1,301	2,133,774	92,794	10,037	153,981	10,656	34,302	96	94

* *Less than 1/2 cord.*

[1] *Includes only those counties that supplied pulpwood in 2000.*

Table may not add due to rounding.

Table 7.--Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 2000

(In standard cords, unpeeled)

Forest Survey Unit and county [1]	All species	Species group										
		Northern white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar
Northeastern												
Florence	56,832	8	855	4,911	698	1,160	37	125	23	985	20,154	366
Forest	96,884	–	6,325	1,262	757	4,403	282	5,869	386	3,088	25,871	203
Langlade	137,963	–	7,174	447	656	1,682	429	2,148	449	6,109	37,061	105
Lincoln	134,819	–	4,945	947	2,542	3,455	593	2,429	764	4,963	49,286	185
Marinette	115,936	–	3,619	1,106	19,510	14,776	1,150	1,264	385	1,387	44,098	674
Menominee	76,588	394	3,609	6,853	6,398	5,798	1,774	1,835	563	1,959	22,046	322
Oconto	47,905	–	1,466	187	1,453	5,550	254	677	124	1,014	19,950	322
Oneida	157,554	–	8,543	643	9,451	21,437	3,003	14,163	2,600	3,022	45,193	224
Shawano	35,592	–	610	1,553	232	5,457	90	65	18	1,037	16,076	6
Vilas	141,901	–	2,674	304	20,158	9,679	3,171	2,094	767	1,724	63,053	853
Total	1,001,974	402	39,820	18,213	61,855	73,395	10,783	30,669	6,079	25,289	342,787	3,260
Northwestern												
Ashland	79,555	–	2,323	101	1,230	3,024	422	4,603	1,116	2,165	30,523	8
Barron	17,156	–	14	–	341	1,331	172	315	–	308	9,914	–
Bayfield	186,367	–	3,902	29	30,284	7,797	2,333	655	22	2,944	81,626	638
Burnett	61,508	–	816	–	21,165	8,080	244	83	–	254	23,093	1
Douglas	195,727	–	17,220	–	42,615	10,947	1,091	4,718	2,098	899	78,133	1,398
Iron	129,825	–	3,504	554	148	2,237	372	2,069	209	3,289	65,109	106
Polk	30,842	–	18	–	6,919	663	186	127	374	320	18,567	71
Price	124,305	–	5,899	1,046	1,233	2,400	452	3,474	2,090	4,190	42,417	85
Rusk	61,029	–	302	17	199	1,264	314	4,057	807	2,016	25,140	32
Sawyer	157,658	–	4,510	70	3,660	3,481	1,319	6,293	275	5,740	62,468	7
Taylor	65,090	–	2,746	374	41	441	49	1,147	696	2,581	24,963	16
Washburn	101,601	–	540	–	22,603	10,511	99	327	29	1,499	45,454	1
Total	1,210,663	–	41,794	2,191	130,438	52,178	7,052	27,869	7,715	26,204	507,408	2,363
Central												
Adams	77,353	–	333	–	25,600	23,476	3,204	44	54	260	5,746	–
Chippewa	36,270	–	13	–	791	2,297	402	228	29	787	17,526	6
Clark	89,159	–	41	85	4,948	5,974	1,707	258	233	2,243	38,115	10
Eau Claire	33,667	–	–	–	6,214	6,155	684	28	–	597	7,091	2
Jackson	92,722	–	–	–	19,092	16,120	6,410	234	99	1,013	10,582	6
Juneau	51,210	–	–	–	18,781	10,969	2,402	143	32	277	4,585	–
Marathon	94,241	–	389	1,323	834	5,820	720	2,023	25	4,185	34,492	26
Marquette	13,241	–	–	–	1,572	9,262	1,116	–	14	34	201	–
Monroe	34,078	–	–	–	7,335	4,690	2,725	140	127	391	2,586	1
Portage	37,088	–	136	139	5,982	16,274	1,988	638	69	343	5,171	4
Waupaca	21,824	–	28	–	153	12,166	816	48	–	472	2,867	1
Waushara	27,611	–	–	–	1,644	18,729	1,938	113	–	123	672	–
Wood	41,097	–	16	–	3,374	8,215	1,825	295	–	536	17,674	1
Total	649,561	–	954	1,546	96,321	140,147	25,937	4,194	682	11,262	147,309	58

Southwestern												
Buffalo	3,999	–	–	–	11	372	147	281	–	63	1,922	–
Crawford	114	–	–	–	–	56	13	–	–	2	7	–
Dunn	10,353	–	–	–	969	3,978	1,047	50	–	152	2,168	–
Grant	4,389	–	–	–	164	3,903	167	–	–	6	7	–
Iowa	1,482	–	–	–	11	736	588	–	–	3	10	–
La Crosse	6,004	–	–	–	98	1,797	401	392	–	48	260	–
Lafayette	14	–	–	–	–	–	–	–	–	1	–	–
Pepin	3,368	–	–	–	11	159	–	–	–	145	1,067	6
Pierce	6,907	–	–	–	–	178	83	–	–	597	608	–
Richland	5,265	–	–	–	27	2,344	632	–	–	91	412	5
Sauk	14,710	–	–	–	2,793	6,050	1,765	152	–	170	843	1
St Croix	10,131	–	56	–	1,980	3,670	417	840	–	67	2,312	–
Trempealeau	11,960	–	–	–	309	5,659	1,634	239	–	116	1,770	–
Vernon	8,119	–	4,177	–	19	1,145	611	86	–	4	457	6
Total	86,815	–	4,233	–	6,392	30,047	7,505	2,040	–	1,464	11,842	19
Southeastern												
Brown	523	–	–	–	41	353	–	–	–	5	66	3
Columbia	5,366	–	–	–	186	3,017	500	195	–	37	191	–
Dane	140	–	–	–	–	89	51	–	–	–	–	–
Dodge	29	–	–	–	–	–	9	–	–	3	–	–
Door	785	–	–	15	103	108	–	–	27	53	72	–
Fond Du Lac	2,099	–	–	–	–	107	14	–	–	71	340	5
Green	150	–	–	–	–	29	84	–	–	–	37	–
Green Lake	1,398	–	–	–	–	961	263	15	–	–	34	–
Jefferson	1,728	–	–	–	29	245	162	53	–	–	1,223	–
Kenosha	205	–	–	–	–	53	152	–	–	–	–	–
Kewaunee	415	–	–	13	–	226	–	23	–	12	29	–
Manitowoc	509	–	–	5	6	168	74	63	–	19	–	–
Outagamie	2,817	–	–	–	–	308	–	232	–	135	174	2
Ozaukee	622	–	–	–	–	11	158	435	–	1	5	–
Racine	843	–	–	–	26	457	287	16	–	5	–	–
Sheboygan	249	–	–	–	–	–	13	214	–	1	11	–
Walworth	1,222	–	–	–	59	824	326	14	–	–	–	–
Washington	836	–	–	–	–	464	194	17	–	13	6	–
Waukesha	2,929	–	–	–	68	2,104	468	74	–	15	55	–
Winnebago	2,600	–	–	–	–	289	26	279	–	72	340	5
Total	25,466	–	–	33	519	9,812	2,782	1,628	27	442	2,582	16
State total	2,974,479	402	86,802	21,983	295,524	305,578	54,059	66,399	14,504	64,662	1,011,930	5,716

(Table 7 continued on next page)

(Table 7 continued)

Forest Survey Unit and county [1]	Species group										
	Bass-wood	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hard maple	Soft maple	Red oak	White oak	Other hardwoods
Northeastern											
Florence	1,843	1,070	3,669	1,156	2	262	8,939	9,104	895	51	518
Forest	3,988	762	10,644	1,739	11	2,518	13,678	12,519	1,980	245	353
Langlade	5,230	1,054	15,046	3,051	27	6,671	24,226	22,192	3,269	490	447
Lincoln	6,367	230	11,345	1,816	93	7,553	18,718	14,294	3,370	832	93
Marinette	2,402	755	4,128	1,085	1	382	8,414	8,380	1,879	178	364
Menominee	348	201	2,778	1,139	2	896	9,117	8,217	2,003	144	192
Oconto	2,068	342	2,430	649	1	868	4,802	4,716	803	75	156
Oneida	5,869	12	13,498	819	110	878	14,041	9,036	3,937	956	115
Shawano	358	–	1,998	361	1	173	3,473	3,209	737	138	1
Vilas	7,210	144	10,837	605	51	463	8,749	6,568	2,162	514	120
Total	35,683	4,572	76,373	12,421	300	20,664	114,157	98,234	21,037	3,623	2,359
Northwestern											
Ashland	1,403	47	9,754	767	5	1,949	8,246	6,436	3,236	2,195	2
Barron	131	–	1,299	44	–	51	1,373	1,444	342	79	–
Bayfield	2,445	–	21,916	504	20	504	13,820	13,302	2,954	651	20
Burnett	128	–	2,761	25	–	25	1,668	1,875	1,064	224	–
Douglas	654	–	20,970	90	–	90	4,231	10,142	371	61	–
Iron	3,203	462	9,765	1,277	52	3,320	16,749	13,411	2,942	822	227
Polk	122	–	1,316	28	–	28	945	995	135	27	–
Price	4,366	22	18,989	1,192	43	1,752	17,676	12,367	3,672	895	43
Rusk	2,189	7	6,932	450	416	837	8,217	6,429	1,172	216	16
Sawyer	3,569	18	20,316	1,548	3	1,987	20,693	18,343	2,902	452	3
Taylor	1,918	95	7,887	1,045	407	3,637	8,601	6,973	1,268	196	8
Washburn	829	1	4,358	153	1	171	6,486	6,658	1,587	293	1
Total	20,957	652	126,263	7,123	947	14,352	108,707	98,375	21,644	6,111	320
Central											
Adams	25	–	398	16	–	15	1,059	976	11,453	4,695	–
Chippewa	1,103	5	3,629	268	469	633	3,501	2,211	1,985	383	3
Clark	994	12	8,002	515	72	856	8,493	7,128	7,805	1,662	5
Eau Claire	290	1	1,809	143	1	161	2,247	1,876	5,413	955	1
Jackson	654	–	3,413	311	4	311	3,878	2,886	18,573	9,130	4
Juneau	71	–	547	41	–	49	1,051	968	7,749	3,546	–
Marathon	1,676	253	5,337	1,756	13	8,025	12,568	11,755	2,619	390	13
Marquette	8	–	71	12	–	5	128	107	590	120	–
Monroe	73	–	770	31	–	31	1,746	1,440	8,244	3,748	–
Portage	286	–	848	82	2	70	1,278	1,092	2,155	528	2
Waupaca	104	20	607	170	1	645	1,564	1,438	601	122	1
Waushara	23	–	428	8	–	4	865	449	1,944	672	–
Wood	164	1	997	73	1	87	2,001	1,885	2,545	1,406	1
Total	5,471	292	26,857	3,426	563	10,891	40,379	34,212	71,674	27,355	30

Southwestern											
Buffalo	28	–	224	17	–	17	281	181	268	188	–
Crawford	4	–	2	–	–	–	8	8	11	2	–
Dunn	81	1	474	48	–	69	567	434	272	43	–
Grant	4	–	21	2	–	2	20	16	69	9	–
Iowa	1	–	5	–	–	–	12	11	92	13	–
La Crosse	8	–	165	–	–	–	353	181	1,184	1,118	–
Lafayette	1	–	4	–	–	–	3	3	1	–	–
Pepin	221	–	299	3	3	3	583	279	483	101	3
Pierce	10	58	62	295	–	1,739	1,563	1,608	96	9	–
Richland	216	–	295	–	3	–	649	349	181	58	3
Sauk	77	–	393	32	–	29	655	565	989	195	–
St Croix	19	–	160	11	–	11	256	252	69	9	–
Trempealeau	36	–	591	17	–	17	677	391	321	183	–
Vernon	217	–	279	–	3	–	571	271	206	61	3
Total	924	59	2,976	425	9	1,887	6,199	4,550	4,243	1,991	9
Southeastern											
Brown	3	–	17	2	–	2	16	13	3	–	–
Columbia	22	–	125	14	–	14	119	95	713	140	–
Dane	–	–	–	–	–	–	–	–	–	–	–
Dodge	–	–	1	1	–	–	7	8	–	–	–
Door	3	–	44	21	–	2	160	174	4	–	–
Fond Du Lac	216	–	278	–	2	–	567	267	166	63	2
Green	–	–	–	–	–	–	–	–	–	–	–
Green Lake	–	–	2	–	–	–	3	2	104	14	–
Jefferson	–	–	–	–	–	–	–	–	8	8	–
Kenosha	–	–	–	–	–	–	–	–	–	–	–
Kewaunee	3	–	22	5	–	2	38	38	4	–	–
Manitowoc	5	–	36	7	–	3	58	57	5	1	–
Outagamie	94	–	383	25	1	18	757	460	173	55	1
Ozaukee	–	–	1	*	–	–	4	4	–	–	–
Racine	2	–	14	1	–	1	13	11	6	3	–
Sheboygan	–	–	1	*	–	–	4	4	–	–	–
Walworth	–	–	–	–	–	–	–	–	–	–	–
Washington	7	–	41	5	–	4	41	35	7	1	–
Waukesha	2	–	19	5	–	1	47	49	13	10	–
Winnebago	216	–	274	2	3	–	572	274	184	59	3
Total	573	–	1,258	87	6	48	2,409	1,492	1,392	354	6
State total	63,608	5,574	233,728	23,481	1,825	47,842	271,850	236,863	119,990	39,433	2,724

* *Less than 1/2 cord.*

[1] *Includes only those counties that supplied pulpwood in 2000.*

Table may not add due to rounding.

Table 8.--Number of industrial pulp or particleboard plants in the Lake States by product form, species group used, and State, 2000

Product form and species group	Total Lake States	State		
		Michigan	Minnesota	Wisconsin
Roundwood				
Softwoods				
Northern white-cedar	2	2	–	–
Balsam fir	17	4	5	8
Hemlock	5	1	–	4
Jack pine	14	3	6	5
Red pine	15	3	7	5
White pine	8	2	1	5
Spruce	16	3	6	7
Tamarack	8	1	2	5
Total plants using softwoods [1]	24	5	10	9
Hardwoods				
Ash	15	7	1	7
Aspen	37	10	13	14
Balsam poplar	14	5	7	2
Basswood	19	10	4	5
Beech	8	7	–	1
White birch	26	9	9	8
Yellow birch	8	5	–	3
Cottonwood	3	–	1	2
Elm	6	3	–	3
Hickory	1	1	–	–
Hard maple	19	9	2	8
Soft maple	20	10	3	7
Red oak	12	6	–	6
White oak	6	3	–	3
Other hardwoods	6	5	–	1
Total plants using hardwoods [1]	43	11	13	19
Total plants using roundwood [1]	45	12	14	19
Residues				
Softwood	10	2	2	6
Hardwood	21	7	5	9
Total plants using residues [1]	22	7	5	10
Total plants [1]	47	12	14	21

[1] *Some plants use more than one species, so numbers in columns are not additive.*

Table 9.--Average daily production of active wood pulp mills in the Lake States by State, company, location, and type of pulp produced, 2000

(In tons per 24 hours)

State and company	Location	Average daily production	Type of pulp produced				
			Sulfite	Kraft	Groundwood/ mechanical	Semi-chemical	Thermo-mechanical
Michigan							
International Paper Co.	Quinnesec	1,200	–	1,200	–	–	–
Johnson Controls	Battle Creek	8	–	–	–	–	8
Louisiana-Pacific Corp.	Alpena	250	–	–	250	–	–
Mead Corp.	Escanaba	1,234	–	1,234	–	–	–
Menasha Corp.	Otsego	660	–	–	–	660	–
Packaging Corp. of America	Manistee	450	–	–	–	450	–
Sappi/Sd Warren	Muskegon	300	–	300	–		–
Smurfit-Stone Container	Ontonagon	774	–	–	–	774	–
Total	8 mills	4,876	–	2,734	250	1,884	8
Minnesota							
Blandin Paper	Grand Rapids	500	–	–	500	–	–
Boise Cascade	International Falls	967	–	967	–	–	–
Certainteed Corp.	Shakopee	242	–	–	–	–	242
Georgia-Pacific Corp.	Duluth	240	–	–	–	–	240
International Bildrite Inc.	International Falls	100	–	–	100	–	–
International Paper Co.	Sartell	850	–	–	–	–	850
Potlatch Corp.	Cloquet	510	–	510	–	–	–
Stora Enso North America	Proctor	325	–	–	325	–	–
Total	8 mills	3,734	–	1,477	925	–	1,332
Wisconsin							
Appleton Coated	Combined Locks	48	–	–	48	–	–
Fraser Papers Inc.	Park Falls	170	170	–	–	–	–
Georgia-Pacific Corp.	Nekoosa	400	–	400	–	–	–
Georgia-Pacific Corp.	Phillips	75	–	–	75	–	–
Georgia-Pacific Corp.	Port Edwards	250	250	–	–	–	–
Georgia-Pacific Corp.	Superior	235	–	–	235	–	–
Globe Building Materials	Cornell	135	–	–	135	–	–
International Paper Co.	Kaukauna	350	–	350	–	–	–
Packaging Corp. of America	Tomahawk	1,378	–	–	–	1,378	–
Stora Enso North America	Biron	400	–	–	400	–	–
Stora Enso North America	Kimberly	50	–	–	50	–	–
Stora Enso North America	Niagara	250	–	–	250	–	–
Stora Enso North America	Stevens Point	200	–	–	200	–	–
Stora Enso North America	Wisconsin Rapids	1,200	–	1,200	–	–	–
Wausau-Mosinee Paper Corp.	Brokaw	280	280	–	–	–	–
Wausau-Mosinee Paper Corp.	Mosinee	285	–	285	–	–	–
Weyerhaeuser	Rothschild	150	150	–	–	–	–
Total	17 mills	5,856	850	2,235	1,393	1,378	–
Lake States total	33 mills	14,466	850	6,446	2,568	3,262	1,340

Table 10.--Annual production of active particleboard and panel mills in the Lake States by State, company, location, and product produced, 2000

(In million square feet 3/4-inch basis)

State and company	Location	Product produced	Annual production
Michigan			
Georgia-Pacific Corp.	Gaylord	Particleboard	296
Louisiana-Pacific Corp.	Newberry	Oriented strandboard	79
Louisiana-Pacific Corp.	Sagola	Oriented strandboard	188
Weyerhaeuser Co.	Grayling	Oriented strandboard	242
Total	4 mills		805
Minnesota			
Louisiana-Pacific Corp.	Two Harbors	Oriented strandboard	60
Northwood Panelboard Co.	Solway	Oriented strandboard	199
Potlatch Corp.	Bemidji	Oriented strandboard	260
Potlatch Corp.	Cook	Oriented strandboard	125
Potlatch Corp.	Grand Rapids	Oriented strandboard	180
Trus Joist	Deerwood	Laminated structural lumber	n/a
Total	6 mills		824
Wisconsin			
Louisiana-Pacific Corp.	Hayward	Oriented strandboard	250
Louisiana-Pacific Corp.	Tomahawk	Oriented strandboard	55
Marshfield Doorsystems	Marshfield	Particleboard	72
Rodman Industries	Marinette	Particleboard	13
Total	4 mills		390
Lake States total	14 mills		2,019

Table 11.--Production and imports of pulpwood, Central States, 2000

(In standard cords, unpeeled)

Product form, species group, and destination	Production by State[1]				Regional Total	Imports	
	Illinois	Indiana	Iowa	Missouri		Lake States	Total receipts
Roundwood							
Softwoods							
Lake States	3,065	–	468	–	3,533	–	–
Northeastern States	–	3,953	–	–	3,953	–	–
Southern States	157	–	–	–	157	–	–
Total	3,222	3,953	468	–	7,643	–	–
Soft hardwoods[2]							
Central States	13,609	8,928	11,362	10,270	44,169	–	44,169
Lake States	2,622	–	–	–	2,622	–	–
Northeastern States	–	117	–	–	117	–	–
Southern States	10,023	4,467	–	2,638	17,128	–	–
Total	26,254	13,513	11,362	12,908	64,036	–	44,169
Hard hardwoods[3]							
Central States	6,594	14,100	4,973	802	26,470	–	26,470
Northeastern States	–	53	–	–	53	–	–
Southern States	32,059	13,333	–	94,079	139,471	–	–
Total	38,653	27,486	4,973	94,881	165,994	–	26,470
Total all roundwood							
Central States	20,203	23,029	16,335	11,071	70,638	–	70,638
Lake States	5,687	–	468	–	6,155	–	–
Northeastern States	–	4,124	–	–	4,124	–	–
Southern States	42,239	17,800	–	96,718	156,756	–	–
Total	68,130	44,952	16,802	107,789	237,673	–	70,638
Residues							
Softwoods							
Central States	–	–	11,914	–	11,914	7,942	19,856
Southern States	–	11	–	925	936	–	–
Total	–	11	11,914	925	12,849	7,942	19,856
Hardwoods							
Central States	11,821	46,958	18,136	5,514	82,429	3,676	86,105
Lake States	–	14,081	842	–	14,923	–	–
Northeastern States	–	1,503	–	–	1,503	–	–
Southern States	12,036	60,872	–	97,841	170,748	–	–
Total	23,856	123,414	18,978	103,355	269,603	3,676	86,105

Total all residues							
Central States	11,821	46,958	30,050	5,514	94,343	11,618	105,961
Lake States	–	14,081	842	–	14,923	–	–
Northeastern States	–	1,503	–	–	1,503	–	–
Southern States	12,036	60,883	–	98,766	171,684	–	–
Total	23,856	123,424	30,892	104,280	282,452	11,618	105,961
Total all wood material							
Central States	32,024	69,987	46,385	16,585	164,981	11,618	176,599
Lake States	5,687	14,081	1,310	–	21,078	–	–
Northeastern States	–	5,626	–	–	5,626	–	–
Southern States	54,275	78,682	–	195,483	328,440	–	–
Total	91,986	168,376	47,694	212,069	520,125	11,618	176,599

[1] *Vertical columns of figures under the box heading "Production by State" present the amount of roundwood cut or residue generated in each State.*

[2] *Hardwood species with an average specific gravity of 0.50 or less.*

[3] *Hardwood species with an average specific gravity greater than 0.50.*

Table may not add due to rounding.

Table 12.--Central States pulpwood production by product form and species group, 1996-2000

(In standard cords, unpeeled)

Product form and species group	1996	1997	1998	1999	2000
Roundwood					
Softwoods	16,993	10,269	18,680	10,283	7,643
Soft hardwoods[1]	89,638	86,312	34,475	46,232	64,036
Hard hardwoods[2]	60,817	66,818	126,197	141,997	165,994
Total	167,446	163,396	179,351	198,511	237,673
Residues					
Softwood	2,159	19,259	38,176	19,773	12,849
Hardwood	223,390	229,796	254,747	247,244	269,603
Total	225,550	249,056	292,923	267,017	282,452
Total all wood material	392,999	412,452	472,275	465,528	520,125

[1] *Hardwood species with an average specific gravity of 0.50 or less.*

[2] *Hardwood species with an average specific gravity greater than 0.50.*

Table may not add due to rounding.

Table 13.--Central States pulpwood production by State and destination, 1996-2000

(In thousand standard cords, unpeeled)

Year	Illinois			Indiana			Iowa			Missouri		
		Destination			Destination			Destination			Destination	
	Total	Central States	Other States	Total	Central States	Other States	Total	Central States	Other States	Total	Central States	Other States
1996	95	53	41	149	44	105	23	22	1	126	11	115
1997	70	21	49	175	70	105	35	31	4	133	11	122
1998	79	20	59	183	68	115	34	29	5	176	13	163
1999	79	22	58	176	73	102	33	29	4	177	12	166
2000	92	32	60	168	70	98	48	46	1	212	17	195

Table may not add due to rounding.

Table 14.--Average daily production of active wood pulp mills in the Central States by company, location, and type of pulp produced, 2000

(In tons per 24 hours)

Company	Location	Average daily production	Type of pulp produced	
			Groundwood/ mechanical	Semi-chemical
International Paper	Terre Haute, Indiana	250	–	250
Box USA	Fort Madison, Iowa	108	–	108
Jeld-Wen Fiber of Iowa	Dubuque, Iowa	80	80	–
Huebert Brothers Products	Booneville, Missouri	60	60	–
Central States total	4 mills	498	140	358

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Discusses 2000 production and receipts in the Lake, Central, and Plains States. Shows Michigan, Minnesota, and Wisconsin production by species for each county and compares production by Forest Survey Unit with that of previous years. Presents production data for Illinois, Indiana, Iowa, and Missouri by species group and product form. Includes 2000 production for the Plains States by species group and product form.

KEY WORDS: Roundwood, whole-tree chips, residue, pulpwood, particleboard, Michigan, Minnesota, Wisconsin, Illinois, Indiana, Iowa, Missouri, Plains States.

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